FEDERAL ENVIRONMENTAL ASSESSMENT BOARD

Sitting in the Town Hall, Newcastle,
Ontario on

VOLUME 6

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FEDERAL ENVIRONMENTAL ASSESSMENT BOARD

BEFORE:

MR. J. S. KLENAVIG	Chairman
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MR. M. DUNCAN	Member
DR. ELLAN DEROW	Member
MR. M. C. CHENG	Member
DR. D. P. SCOTT	Member
MR. R. S. LANG	Member

MR. M. WARDER	Acting Secretary
MR. B. TIMMERMANS	Public Participation Officer

Sitting in the Town Hall
Newcastle, Ontario, on
Thursday, October 6, 1977

APPEARANCES:

MR. C. GRANT	Counsel for Eldorado Nuclear
MR. D. FROST	Representative for Eldorado Nuclear
MR. G. COLBOURNE	Representative for Eldorado Nuclear

VOLUME 6

INTERVENORS:

DR. J. WIEBE	Department of Fisheries and the Environment
MR. J. VELDHUIS	A Citizen
MRS. P. LAWSON	A Citizen
MR. R. WHITNEY	A Citizen

Nethercut & Company Limited,
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44 York Street, Toronto, Ont.

Per: C. Denman

Upon commencing at 10:00 a.m.

THE CHAIRMAN: Good morning ladies and gentlemen. In case anyone doesn't know my name is John Klenavig and I propose to dipense with my regular three minute speech this morning in view of the time. However, before we start with our first speaker, I will give you a list of the people scheduled today in case you don't have it. The first is Mr. John Veldhuise, the Department of Fisheries and the Environment, Mrs. Patricia Lawson, the Ganaraska Trail Association, Mrs. Joan Woods, Port Hope, Professor Horst Wittman, Port Hope, the Town of Newcastle, Mr. Bruce Laird, Professor Paehlke, and then this evening, the question period with Eldorado.

Before we proceed with our first speaker, I would like to give the floor to Murry Duncan.

MR. DUNCAN: As you are probably aware, I am on the staff of the Atomic Energy Control Board which is a regulatory agency which has the ultimate responsibility for licencing the proposed Eldorado facility. My normal duties are related to the relation of the facilities in the fuel cycle. I have been involved in safety and assessment of such facilities for over fifteen years,

both in private industry and in government. It was because of this experience I was appointed to this panel.

I felt satisfied personally that I could divorce myself sufficiently from my regular responsibility in order to participate in this panel's activities with a sufficient degree of objectivity. I firmly believe in the need for the utmost objectivity in this crucial phase of the regulatory process in order that the concerns and critiques of the public and the various agencies involved can be adequately factored into the regulatory process.

My observations over the past two weeks which have included discussions with members of the public and other panel members, have led me to conclude that because of my association with the work of AECB, my presence as a panel member has inhibited the kind of dialogue between the panel and the public which is so essential to a well balanced report on the part of this panel.

I have informed the panel members of my conclusions and indicated to them my decision. I would like to now announce publically that I have decided to withdraw from the panel in order that these encumbrances I have mentioned can be eliminated

and the most objective interchange can occur between all participants, which is what we all desire.

I would like to point out that this is my own decision and not one influenced by my management or other agencies. In discussions with the panel, it was agreed it would be most appropriate if I were to withdraw at this time. I accept this decision and I will step down immediately and so advise the Executive Chairman of the Environmental Assessment Panel in writing as soon as possible. Thank you.

THE CHAIRMAN: Thank you, Murray. We would, of course, look forward to the participation of your agency in a second phase of the hearings in the technical capacity.

MR. DUNCAN: This will be the case. We will be here as an observer and participate as the need arises.

THE CHAIRMAN: We have not had a formal procedure for members withdrawing from the panel, but it seems that the turning down of the name card signifies the end of the participation. I would like to thank you on behalf of the panel for your participation so far.

MR. GRANT: I would like to make a short statement. We are very distressed at this

turn of events. We never felt that the participation of Mr. Duncan on the panel and his occupation in AECB in any way, shape or form was in conflict or presented the public with any reasonable concern as to your objectivity. I would like to remind the panel and the public that Eldorado has voluntarily agreed to submit to this EARP process. We are very very far down the road in terms of satisfying the published known requirements of this process and we have indicated right from the beginning that our willingness to comply with the process has been based on the process proceeding with reasonable diligence and dispatch.

I am not authorized at this time to indicate that we would pursue the process with this panel as perhaps reconstituted or without Mr. Duncan, but I would like you to know that we feel this development very seriously and we will have to consider whether or not we would choose to elect to continue with this panel, having regard to the fact that we have already spent so much time and made so much effort in presenting to you and the others our views and a great deal of information.

THE CHAIRMAN: Thank you, Mr. Grant. I think the factor was considered by the panel and I know that the AECB will be monitoring the results

of the panel very closely. Would you like to speak to that, Mr. Duncan?

MR. DUNCAN: I would be very disturbed if Eldorado took any action in the light of modifying their approach to this particular procedure. The board views this procedure as an integral part of the overall regulatory procedure and my withdrawl should have no effect whatsoever on the type of assessment that is being done in this light. We will still be monitoring the whole procedure to determine its effectiveness and we will factor that into the regulatory process.

MR. GRANT: My problem is more involved than that. As I understand it, the panel with the exception of Mrs. Derow and Mr. Lang is composed of persons who are in fact employees or officers or engaged with various departments who have in fact in these proceedings expressed serious and I hope well thought criticisms of our proposal. In fact, those persons have presented themselves here in a capacity as intervenors. So, if there is any question of standards of objectivity, if what you are endeavouring to do, Mr. Duncan, by withdrawing from the panel is to promote an aura of objectivity, I think we are forced to the conclusion that a great many other members of the panel have the same

problem. Mr. Shikaze is a member of the federal Department of the Environment and we are about to receive a submission from that department. Now, he has a problem in terms of his objectivity. We view his position with Environment Canada as being likened to a biased opinion with respect to our views as to the technical things said by the Department of Environment Canada. He has a problem. I can go through each member of the panel with the exception of Mr. Lang and Mrs. Derow.

Really, Mr. Duncan, I would ask that you reconsider your position. Without your presence on the panel, we at Eldorado are naturally concerned that no member of the panel may have had an intimate knowledge of the problems that my client has in the nuclear industry. In particular, there are certain areas where we might choose to indicate to the panel that in the case of proprietary information or matters of a secret nature which may already be known to you, I had in mind suggesting to the panel that they might select you as an arbiter with respect to those matters and they could discuss those matters with you. We have certain problems with respect to secrecy that you are very much aware of. We have problems with respect to secrecy of other proprietary information in our

possession and which belongs to other persons for which we have paid substantial sums of money.

I think your withdrawl from the panel will leave the panel and the whole process in a very deficient position and create an enormous void that we are not very happy about.

THE CHAIRMAN: Thank you, Mr. Grant. We appreciate your pros and cons. Your last concern, I hope we can enlighten you from the point of view, using the AECB representatives as technical advisors and relying on them for information and the type of arbitration that you mentioned. I am sure we can discuss this later and I accept the point that you enter into this voluntarily. I hope you will continue and see what develops out of it.

MR. GRANT: My concern, Mr. Chairman, is that under the guidelines established for the creation of your panel which I am quite familiar with, and I am sure you are as well, a panel is struck for the purpose of the consideration of my clients Environmetal Impact Statement. That panel was supposed to come before me to perform a number of functions. The first was the establishment of certain guidelines for the assistance of the proponent and, having done that, receive a great deal of information. Now when the panel changes, I

am not satisfied that you are the panel called for under the guidelines established following the Cabinet decision. Therefore, I would like to ask you that you adjourn these proceedings for half an hour in order that I can seek instructions as to whether we will continue with our presence here. I seriously question your authority with the resignation of Mr. Duncan in the circumstances. The basis upon which he is putting forth his resignation, raises a question in my mind, and very well may in the minds of the public, of the objectivity of a great many members of the panel. I do not want to go through these proceedings and have it alleged at a later stage that they should have been aborted, because not only Mr. Duncan was biased or not objective. So, I would like to ask that we adjourn these hearings so that I can seek instructions.

THE CHAIRMAN: I would like to ask that we could continue in that the purpose of this phase of the hearing is still to gather information and concerns. I appreciate your point, but I think there would be ample opportunity for you to varify this at lunch, if necessary, or at the conclusion of these hearings before we move any further. On that basis, I would like to continue with the people who have come from Toronto and other areas this

morning.

MR. GRANT: Well, I would like to record for formal purposes that we do not propose to take part in the proceedings until we have had an opportunity to seek instructions. I can't, naturally, prevent you from carrying on. I would like to record that our continued presence here is not in any way, shape or form an acknowledgement of your authority to continue within the meaning of the EARP process in light of this development.

THE CHAIRMAN: Thank you, Mr. Grant. We turn now to our first speaker, Mr. John Veldhuise.

MR. VELDHUISE: Mr. Chairman, I am John Veldhuise. I speak on my own behalf and that of my family. I am a resident of Port Granby. I want to make that perfectly clear. I have spent a weekend going through the EIS, the Environmental Impact Statement, and ended up with many many pages of questions and so on. However, if the panel has the same intestinal constitution that I have, I am sure they would be very pleased if I just passed this on in written form with the assurance that you would read it in the near future. I propose to do that with the first twenty-five or so pages and concern myself only with the abstract or the summary points, if that is permissable

THE CHAIRMAN: That is definitely permissable and thank you.

MR. VELDHUISE: I would just like to say, though, there are a number of points in there which, of course, will not appear in the summary, but are of an explanatory nature. So I hope you will pay attention to them as I am sure you will.

SUBMISSION BY MR. VELDHUISE:

Upon examination of the Environmental Impact Statement these major deficiencies appear quite readily. This is not to be construed that no further deficiencies are present or that others of equal or higher status could not be located.

"In view of the proximity of this site to Newtonville, most of the Newtonville data base was applicable to the Port Granby site. Therefore, only a limited programme of field reconnaissance was required at Port Granby to provide a data base equivalent to the information available for the three original sites." App. IIp.1-3

In view of the fact that Port Granby is now the preferred site I would think first hand information would be of the greatest importance.

"The plant site will consist of from 750-1500 acres of land".

The actual land held by Eldorado is

657 acres, therefore, the land holdings are insufficient to meet the minimum safety requirements of 750 acres.

Table 2.2.1 dealing with cooling water and fuel requrements are incomplete for proprietary reasons. Since Eldorado is reluctant to give such basic information we may assume it will be equally reluctant to give more pertinent facts about pollution?

"A separate report to the Atomic Energy Control Board will deal extensively with safety aspects and emissions from both normal and episodic releases." App. II p. 2-7

Since we are dealing with our safety it would seem reasonable that we should have this information and be in a position to deal with the proposed emission standards?

No field studies of the over burden were carried out.

"It is felt, however, that a more extensive study would be ruquired before a comprehensive and detailed review of the overall flow system could be made, etc." App. II p. 3-13

These two aspects are deficiencies of data which could well prove to be of significant importance.

Table 5.3.2 Although this table appears to be correct, how can the average layman make any sense out of it? No standard of optimum water quality has been provided.

No sampling of stream biota was carried out for this study and as such a conclusive evaluation of the on-site streams is not possible. App. II p. 6-48

"Without the benefit of stream sampling data or precise figures describing the effluent quality, an empirical judgement concerning the impact of discharging wastes into these streams cannot be made." App. II p. 6-51

"Access to this area (the Eldorado Nuclear Limited Residue Disposal Area) was not available, however, some assessment was possible by observation from outside.

Map No. 7.3.1 Port Granby includes a major portion of the population of the city of Oshawa, yet table 7.3.4.[a] Port Granby appears to exlude this rather large part of Oshawa's population.

"Port Granby site has no reported archeological sites within its boundaries" App. II p. 7-61. This appears to be contrary to fact. The Canadian Underwater Archeological Society has had an

active interest in the recovery of the "Bermuda" just off the coast of Port Granby for at least the last six years. Mr. Stevenson has been active for several years in locating this ship.

..."there would be little impact on sensitive areas." App. II p. 8-18.

This is a contradiction of terms any impact on a sensitive area must by definition be considered as a significant imact due to its sensitivity. The statement also makes a subjective judgement not necessarily supportable by reliable data, or information.

"The management of low level wastes has not been considered explicitly..." App. II p. 8-26

Is this not germane to these hearings and this study?

We find all of chapter 2 of E.I.S. interspersed with subjective statement which seem to prejudge the Port Granby site.

p.1 e.g. Port Granby offered the best potential
p. 2 It was concluded...
p.4 .....could be safely chosen...
Port Granby was recommended as the most suitable
p. 5 These and other factors...encouraging results...

p. 6 Eldorado Nuclear...had assembled land at Port Granby so that these studies could be advanced.

"It is important to note that there may be changes during detailed engineering design or..." E.I.S. p. 3.1

What is the purpose of these hearings if Eldorado will change its mind and considerations advanced at these hearings?

"The property will remain unchanged from its present use" E.I.S. p. 3.2

The property has already changed from dairy, beef and tobacco to a few fields of corn.

Table 3.2 E.I.S. is composed on the basis of a 5 day week but Eldorado plans to operate on a 7 day per week, 24 hour per day basis.

"At this stage in design, certain waste streams have not been totally characterized and realistically, trace contaminants can only be fully characterized for an operating plant."
E.I.S. p. 3-25.

Therefore, no guarantee of safety can be made to the public. Therefore, the project must be abandoned.

"The prcise details of E.N.L. monitoring programs for Port Granby site have not been

established at this time" E.I.S. p. 3-51.

In view of Eldorado's poor record of the past it seems no genuine effort is made to make restitutions or changes for the future. The project must be abandoned to protect the area from further contamination.

"Detailed procdeures for decommissioning the facility cannot be established." E.I.S. p. 3-53.

I think it is imparative that no matter where the plant is located detailed decommissioning plans are established, particularly since no further Environmental hearings will likely be held.

"Contouring of a water table map is very difficult in areas where the vertical gradients are so pronounced." E.I.S. p. 4-19

This is further proof that the Port Granby area is unsuitable for this type of industrial development.

"Although there are no data from the Port Granby site itself..." E.I.S. p. 4-39.

It would appear that since close to $1,000,000.00 was spent this data could and should have been included.

The background noise level of Port Granby appears to be quite incorrect since a tractor and a tank truck were both idling about

60 metres from the measuring device. There is also no comparison with the present Port Hope site. E.I.S. p. 4-41.

No statistical level of confidence is provided for the information on p. 4-55 (8), nor do I think do most layman understand the information provided.

No evidence of medical or Health factors are evident. Since we are dealing with the safety and health of the residents of the area I would think these aspects would be of paramount importance to present and future generations.

No evidence of any system or method of keeping the public informed and involved in the operation of E.N.L.'s waste management system is evident. In view of the lack of confidence Eldorado Nuclear Limited has with the public and the lack of confidence in A.E.C.B. it is imparative that a public monitoring system or method must be devised to monitor the clean up of the old dump. Eldorado must not be allowed to build further nuclear facilities in the Port Granby area.

Mr. Chairman, you are going to be faced, you and your panel are going to be faced with some very far reaching decisions. I think these are

issues that must be dealt with. Some of them are within the EIS and some of them are outside of EIS. I think it should be sufficient to say that the question of funding is of paramount importance.

Eldorado Nuclear is a corporate body and has, therefore, access to corporate and government funding whereas the intervenors have no funds at this particular time. Eldorado has full time paid experts. We are amateurs. We hold full time jobs. We have to do this on a part time and spare time basis.

Eldorado because of its funding was able to provide a loss of glossy literature and I happen to believe that literature can be very persuasive. We have no literature of that nature. Offices were set up, at least two, by Eldorado. We have no offices. Mailings were sent out. We have no mailings. All of these things cost money.

The question, therefore, is are both sides truly equal? Can the public be equally prepared to participate under this system? Have all citizens been informed so that they can participate in a meaningful manner? Could there have been better and more imput from the public with the necessary funding?

I realize that I am not asking you to

determine how much funding, but I am asking you and your panel to decide should funding be made available to intervenors? The question as to how much and so on need not be discussed. This is a matter for other bodies.

The second question regarding the need, is there a national emergency? Will Canada fall apart if no refinery is built at Port Granby? Do the world projections indicate a need for the kind of expansion proposed in this Eldorado proposal?

The third part that I think is in issue is the responsibility. Has Eldorado Nuclear Limited demonstrated through past and present performance that it has earned the trust of the public? Has it taken a responsive - responsible position in regards to the citizens of Port Granby, Welcome and Port Hope? I think not. In view of its past record, can Eldorado Nuclear be trusted with an even larger responsibility that this Port Granby proposal would entail?

Next, is Port Granby the best or only site? We have seen dramatic demonstrations of the quality producing capability of the area in the form of onions. You have heard about the sensitivity of tomatoes and the concerns of the beef and milk

producers. This would lead one to believe that Port Granby is perhaps not the best site. Can we affort to trade waste for food? Should it be located in such a sensitive area? Have alternatives been given equal consideration or are we dealing with a matter of convenience?

Further, and this is a question I am glad I do not have to meet, but can you, meaning in the plural, assume responsibility for the final product? The final product, of course, is plutonium. We have a number of unstable countries in this world who are quite eager to get into the nuclear proliseration. Wherever we turn, our media tells us about conflicts and wars. I personally lived through World War II and remember it very vividly. I was in Europe at the time. There were a number of treaties and agreements by all countries. Everyone was helping everyone, but when the final end came, and when the crises really developed, those agreements were not lived up to, otherwise we would not have had World War II perhaps.

Emotions run high in times of crisis and it would be very easy for countries who have perhaps far less scruples than we do, to use the plutonium and make it into bombs and hurl them at each other and, in doing so, hurl them back to us.

It is my conviction, Mr. Chairman and panel members, that the refinery must not be built in Port Granby. You said, Mr. Chairman, you had three alternatives. I think you have now only one and that is no go.

THE CHAIRMAN: Naturally we haven't had time to study the first twenty-five pages of your brief, but I can assure you that the panel will. I wonder if there are any questions of the panel on the last twenty-five pages.

MR. SHIKAZE: Just following up on your last comment, Mr. Veldhuise, would you object to any other refinery or any other industry at Port Granby?

MR. VELDHUISE: I think, Mr. Shikaze, that we have had a number of speakers who have adequately expressed by opinion. I would personally prefer to keep that area agricultural, because I see a real need for that. I see that we are selling land for dollars which will devaluate in time, whereas land will appreciate. We will appreciate that, appreciate the land in the future when we need it for food protection. Once covered over with concrete, we can no longer use it for productive capacity.

MR. SHIKAZE: In view of your concerns with respect to the end product that we get out of the refinery, would you object to this being built

anywhere in Canada?

MR. VELDHUISE: At this point without further safeguards and so on, I must say yes, let's have a moratorium until those questions have been settled.

DR. BIRD: Mr. Chairman, Mr. Shikaze has just asked my question about the plant being located elsewhere in Canada. Thank you.

DR. DEROW: I would like to hear your opinion about what should be done with the present waste management facility. How should it be treated?

MR. VELDHUISE: Well, this is a very difficult question because if I say, well, it should be there or there, I am saying I don't want it in my backyard, but my neighbour should take it. That's not fair. I do believe there are areas in Canada where it will have much less impact on the environment in its total phases. With the proper engineering, proper technology and the proper site selection, I think we could probably move it to that site and store it there, so that it will not do the damage it is presently doing to our water and our lands, etc.

THE CHAIRMAN: Any questions from the floor? We have two more speakers. We will take

a short break. Thank you.

---Short recess.

---On resuming.

THE CHAIRMAN: Our next speaker is the Department of Fisheries and the Environment of the Federal Government. Dr. Wiebe?

SUBMISSION BY DR. WIEBE: Mr. Chairman, members of the panel. My name is John Wiebe and I am the Environmental Assessment Coordinator for the Environmental Management Service. My colleauges with me today are Dr. Ray Durham, head of the Radiochemistry Laboratory at the Canada Centre for Inland Waters, and Mr. Simon Llewellyn, Chief of the Environmental Design Section of the Environmental Protection Service.

I would like to make one point clear at the beginning of this submission. The Department of Fisheries and the Environment does not consider itself an intervenor, Mr. Grant. We are here as a technical review organization, and is such that it is a technical review and it contains the comments of some thirty experts of the Department.

The federal Department of Fisheries and Environment has reviewed the Environmental Impact Statement prepared by James F. MacLaren Limited for Eldorado Nuclear and has tabled its findings with

the panel at the outset of these hearings. It was done for the purposes of evaluating the adequacy and technical merit of the EIS and it does not proport to be a statement of the Department of Fisheries and Environment position regarding the Eldorado proposal.

I might say at this time, Mr. Chairman, that we have heard through the course of these hearings numerous references by the lay public to the technical nature of Eldorado's document and their inability to properly review its details, thus relying on this panel to varify the technical statements and claims made. I would hope that these citizens might be assured by this review by this department that the technical adequacy, accuracy and merit have bee dealt with and alleviate some of their concerns.

We have reviewed the document with three considerations in mind: to determine whether it fulfills the general requirements of an environmental impact assessment; to determine whether it fulfills the requirements of the guidelines; and to assure ourselves that all environmental concerns have been addressed and where required, mitigating measures proposed.

We have identified some forty-seven gaps, defficiencies and issues.

We will not deal with all of these at this time, but I do propose to put forth some general comments on the document.

We found that in dealing with alternatives, substantial attention was given to the evaluation and description of alternate sites. The procedure used to rank the sites was questionable. Further, there is no evidence given that alternatives to the project itself or alternative production processes were considered. While the latter is not specifically requested in the guidelines, consideration of alternative processes, feedstocks and methods of cooling may have revealed significant differences in terms of environmental effects.

The EIS fails to represent a clear picture of the net environmental impact of the project. In fact, the document does not deal adequately with the discussion of impact in general. The document makes no clear distinction between environmental effects which are processes set in motion by project actions, and impacts which are the net changes in the environment as a result of the effects.

As well, the EIS has given little consideration to the combined effects of various emissions from the project, or cumulative effects of

the Port Granby Project and existing operations such as the Port Hope Refinery and proposed developments, such as the Darlington nuclear and Wesleyville coal fired generating stations. These cumulative impacts are required in Section Five of the guidelines.

As well, little discussion is given on impacts over various periods of time, in particular, impacts during construction, plant start up, and over the thirty year life expectancy of the plants are not dealt with.

Impacts resulting from increased production of refined uranium are not discussed. Secondary impacts of the project such as increased activity with attendant environmental affects at Eldorado mine sites have not been dealt with.

Little attention has been given to the potential occurrence of non routine events, such as spills, road accidents, process mishaps, their environmental effects and impacts, and the availability or proposed mitigating measures and contingency plans to deal with them. More substantial reference to the Port Hope refinery would have provided some insight and means of comparasion of both non routine events and improved process technology. Details of monitoring programs, polluntants to be measured, frequency of sampling,

station location, etc.

Insufficient detail on the processes employed and the materials balance of the plant has not been presented. This does not allow an adequate analysis of the emissions data and their subsequent impact.

With respect to the waste management site, the adequacy of the new waste management site is dependent upon a number of factors: the method of burial of contaminated wastes; the location of the site such that shore line encroachment will not expose still contaminated material; and the successful ulilization of the bendonite layer to retard infiltration.

It is our opinion that insofficient evidence is presented to validate the conclusions drawn in the EIS and thus to adequately asess the potential impact of the proposed design. A major ommission in the document is details and description of the means by which all existing radioactive wastes at Port Granby will be transferred to the new waste disposal site. Specifically, the concentration of pollutants, the amount of material to be moved, the method of treatment of water saturated wastes and the potential effects resulting from disturbance of the site.

In review of the section dealing with radiological impact of the atmospheric emissions, we have found that the impact may not, in fact, be negligible, as stated in the EIS. Similarily, the potential for radionuclide release from the waste management site and the effect of groundwater may be greater than suggested in the EIS.

In conclusion, we have tables with the panel a sixty-six page technical document. We have, in that document, outlined forty-seven questions and concerns and we would participate in Phase Two and will hopefully receive clarification on some of those questions. Thank you.

DR. DEROW: I was wondering whether among your thirty experts if you had an economist go over the impact statement. I wonder whether in the community factors you were considering economic impacts as well.

DR. WIEBE: It depends on what you call an economist. We have individuals from our social sciences research division that have an economics background.

DR. DEROW: Do you distinguish between community impacts, social impacts, and economic impacts, to clarify more carefully?

DR. WIEBE: We have with us a

member of the staff that reviewed that portion of the document. Perhaps he can answer.

MR. HERTOG: My comment was that the criteria established do not require this to be delved into in any great depth. I did not have time to go into it in any depth myself. All I can do is review the submission.

DR. DEROW: You are referring to the guidelines issued by the panel to Eldorado?

MR. HERTOG: Yes, they were established two years ago and the concern wasn't there.

MR. LANG: I have a couple of questions. The first one is, I don't know, maybe it is a minor one. Do you cover the earthquake question, the potential of the area for earthquakes?

DR. WIEBE: No, we haven't.

MR. LANG: Is that not important?

DR. WIEBE: I don't believe it was considered a major problem.

MR. LANG: The reason I asked that is because although one of the documents says this is a low earthquake zone, I have just read a report on the American side which indicates it is not, on your side of the lake. So, where do I look for clarification of that?

My question about your brief is at page 41. You refer to potential cumulative effects. Could you explain what kind of effects you might expect to find in a place like this or you think should be investigated in this kind of project?

DR. WIEBE: Speaking of cumulative effects in this instance, we are referring to the accumulation or cumulative effects of emissions in the sense of adding emissions from the various plants in the vicinity. An example could be air emissions, if we got into the idea of exposure to radionuclides or any other air emissions, then it is our feeling that the cumulative effect, that is the additional effect for the proposed Port Granby site should have been studied.

MR. LANG: What would be the nature of that cumulative effect? What I am getting at is when you look at standards and say, if you have so many parts per million of x and so many parts per million of y, as long as they meet that requirement, then there are simply that many parts per million. There is no additive effect. You are thinking of an additive effect taking place because pollutants from one area are coming on to another area, but whereas

they meet the criteria for the standard for one site, they may not on the next site. Is that what you mean?

DR. WIEBE: In an additive sense they may not. That's correct.

MR. LANG: What kind of pollutants would you be referring to?

DR. WIEBE: Mainly atmospheric emissions.

MR. LANG: Could that same thing happen in terms of water pollution?

DR. WIEBE: Yes.

MR. LANG: Thermal?

DR. WIEBE: Depending on the pollutant and its characteristics.

MR. LANG: Could you explain to me what you mean by synergistic effects?

DR. WIEBE: Synergistic effects would be the additive effect of two different kinds of pollutants. A cumulative effect, we are generally talking about the single pollutant or a combination or a series of combinations.

MR. LANG: What kinds of dangers are you looking for in terms of synergistic effects?

DR. WIEBE: It is an area

currently under research and we really don't know. It is more a -- I should say -- it is more a feeling, a technical feeling that we have that the combined effect of two different pollutants might be greater than the effect of them individually.

MR. LANG: I guess one concern I have is that while I feel there should be every effort made to cover whatever contingencies we can imagine, how much can we expect of the proponent when the state of the art appears to be so premature, let's say, or immature?

DR. WIEBE: Perhaps we could expect the proponent to state that. It is in fact the state of the art. It is in fact not as it should be.

DR. BIRD: Thank you, Mr. Chairman. Dr. Wiebe, you mentioned at the outset that you were not here acting as an intervenor, but rather as a technical reviewer. Is it fair to ask you whether they are any known plans in the department for a review to be conducted with the intention of developing a departmental position per se on the project, to provide to this panel?

DR. WIEBE: I really cannot answer that at this time.

MR. CHENG: In your review of the sites that were selected for the selection process, did you identify or conclude from the information that any of the sites other than Port Granby offer better waste disposal solutions?

DR. WIEBE: No we did not.

MR. CHENG: Is the information there?

DR. WIEBE: In the method of site selection and description, the information present in the description of these sites, is not such as to allow us to make judgements as to the different capabilities of the various sites.

MR. CHENG: I have just another question on the cumulative effect and the synergistic effect, and it is perhaps not so much a question, but who has -- I won't say responsibility, but the role that addresses this kind of effects?

DR. WIEBE: I am not sure I understand your question.

MR. CHENG: Which organization has the responsibility or role or intention of looking after cumulative effects of projects? This is in the Port Granby area, let's say.

MR. LANG: Do you have an interest in

cumulative effects or do you have a juristiction?

DR. WIEBE: I would say we have a juristiction as the Department of the Environment.

MR. LANG: I think that is what Mr. Cheng is asking. Could you take action on any evidence you get of synergistic or cumulative effects, or is that at the Provincial Government level?

DR. WIEBE: I believe it would be a matter of discussion between the Provincial and the Federal Government. I might point out that cumulative effects were specifically asked for in the guidelines.

DR. BIRD: Mr. Chairman, it seems to me that the question is divided. There are two facets. The cumulative effects question is in my view quite different from the synergistic effects question? I think the cumulative effects, since it has been discussed already, represents really the cumulation of the affect of a particular pollutant on a receptor or series of receptors and that is basically, surely a scientific phenomenon, but there are many groups concerned already about trying to establish a cause and effect relationship. One of them, of course, is the National Research Council, who

has a scientific committee, or an associated committee on the scientific effects of the environment.

The more important question, what I think Mr. Cheng meant was asking is there, in fact, an organization that is conducting research into the question of synergistic effects? That to me is a more fundimental question. Then one could talk about juristiction, responsibility for taking action, which is quite a different issue. If there has been any misunderstanding, I would like to direct the question as to whether you know of an organization that is focusing some of its attention of the research necessary to identify synergistic effects?

DR. WIEBE: Yes, the Department of Fisheries and Environment, in fact, are conducting research on synergistic effects. The question of juristiction is one that I am afraid I can't answer.

DR. BIRD: Could we explore the kinds of studies a little bit more? What kinds of studies are currently in place? What pollutants are being looked at for synergistic effects?

DR. WIEBE: Currently, the major efforts are on heavy metals and the synergistic

effects between these metals.

DR. DEROW: I am interested in the sentence underlined on page four, Dr. Wiebe. We are all quite interested in how we can quickly rectify defficiencies and how we can as a panel recognize the defficiencies that have been rectified. You say the EIS fails to present clearly the net environmental impact of the project. Perhaps you could elaborate and clarify how you would expect this to be presented.

DR. WIEBE: The statement refers to what we think the Environmental Impact Statement is all about. Our impression is that an Environmental Impact Statement should clearly present or predict the state of the environment with and without the proposed project. The impact, then, is that change that would occur if the project went ahead. Our feeling is that the impact statement did not clearly present that picture in its total form. The pieces that may be found throughout the document were not clear. It would take tremendous effort to try and bring those all together and say this is what Port Granby and the surroundings would be like without the refinery and this is what it would be like with a refinery.

DR. DEROW: Now, this is a real problem. In other words, are you saying because they were not all put together in some measureable form, or in a clear conclusion, that that is the defficiency? The problem here is that it is our role as a panel to ferret out from all the different places this clear picture.

DR. WIEBE: I think, if I might interupt, I think if you go back to the guidelines themselves, you will see the state that the guidelines are presented in a manner that will hopefully present a clear picture. In fact, those guidelines cannot be followed. The presentation has not taken place in that manner. Therefore, there is no clear picture emerging and we feel that is a defficiency.

DR. DEROW: I am just trying to get at what clarity really means in the Environmental Impact Assessment. Also, it has to do with objectivity and measurement procedures that we haven't got into and perhaps we will get into.

MR. SHIKAZE: Yes, Dr. Wiebe. One of the concerns that has been adresses throughout these hearings, particularly by local residence, is the use of this particular land which is rich agricultural land, which is needed for the

construction of a refinery. Are you aware of any position or policy that the department has with respect of utilization of agricultural lands or preservation of agricultural lands, either at the department or federal level? Would it be possible to find out?

DR. WIEBE: I don't believe the department has an official position. We do have some general policy statements. There is a federal land policy now under development that contains reference to the land and that is not being adopted.

MR. SHIKAZE: Would that type of policy be more applicable to federal agency departments and crown corporations or would it be a general policy applicable to everyone, do you think?

DR. WIEBE: The federal land policy would be more applicable to federal agencies and corporations.

The national land policy which is being developed in conjunction with the provinces would in fact have effect on this territory.

THE CHAIRMAN: Any questions from the floor?

MR. PATRICIA LAWSON: Given a number of different sites for dumping radioactive

wastes, would you not think that on the shores of Lake Ontario is a particularly hazardous place?

DR. DURHAM: That is a leading question, Mrs. Lawson. I don't think we could give you an honest answer at this time. As you know, there are nuclear stations being built around the shores of the Great Lakes, and obviously, there will be release of radionuclei to some extent. There have been studies as to their effect. At the moment, the predictions appear to point towards very very little pollution in the next twenty-five to thirty years in the Great Lakes. So, I can't answer your question directly.

MR. LOYD STEVENSON: My name is Loyd Stevenson. I live in Newcastle. I am very interested in the department's questions and apparent findings. Now, is it not so that many of your questions are strictly supposition, not known to you or any one else until two factors get together, and science or people, laymen, making decisions. In your department if you get information and we get ecological changes, you change your rules to fit the conditions to preserve our heritage. Is that right sir?

DR. WIEBE: I would say the entire impact assessment role is one of supposition and

prediction. Obviously, the project has not been built. We cannot guarantee what will happen.

MR. STEVENSON: That's right. Some of your questions alarm me, but when I analyzed it and felt that you people are out to preserve everything, or us, I also feel that Eldorado is making a development that God knows we need to create power and energy for this vast growing country. Now, when you people come up, you will be studying it, as long as grass grows green, you will be going to Eldorado and saying we find this condition, if they haven't already found it, and you will work together because after all, you were just laymen but you went to school and are now experts in your field. They are experts in their field and together, laymen like me, will be able to watch my grandchildren run and play safely. But it is when you take your suppositions to the other people and come up with a reasonable answer, get together and those questions will be answered.Doyou give Eldorado those questions in detail that you said you didn't have answers for? Are you waiting for Eldorado to answer every question in detail that anybody with an imagination could come up with?

THE CHAIRMAN: I believe that

Eldorado had the brief from the department and were intending to include it amongst the other technical reviews they have and provide answers to it. I understand they received the brief last week. Perhaps you could confirm that, Mr. Grant.

MR. GRANT: Yes, we did.

THE CHAIRMAN: And, sir, the short answer to your question is the brief has been provided to Eldorado and we are looking for an answer to it as expeditiously as they can get it.

DR. WIEBE: In answer to your question as to the intentions of the department, you are quite right.

MR. STEVENSON: I am quite sure they are ---

MR. LANG: What is he quite right about?

DR. WIEBE: In that we are aiming to preserve part of the heritage of this country.

MR. LANG: The impression I received from what he was saying is that governments acting as regulators in the public interest, concerned regulators, and proponants acting as concerned responsible corporate citizens, meeting a public need, put together is going to handle

what might happen in the future. One thing you suggested, I think this is part of the reason for these kinds of processes, is that there is a lot of uncertainty both about the behaviour of the regualators and the proponant and what might come on at the plant. There are, as you say, certain kinds of effects that cause one person to say it is an impact and another person to say it isn't. There is that side of it and I wanted to make sure I wasn't getting the impression that you agreed with what I think I heard him say.

DR. WIEBE: I guess I didn't interpret what he said the same way as you do.

THE CHAIRMAN: Any further questions?

MR. GRANT: Dr.Wiebe, I think it would be very nice if, what you said, we should describe the picture of what life is now in Port Granby and describe a similar picture of life in Port Granby if we build the refinery there. We think we have endeavoured to do that. It is not a simple matter and not something readily understood by the average public. You said also in this context that they did not follow the guidelines and that is why you were taking and

reviewing part of our environmental impact statement. In fact, I was comparing my guidelines to the index, to our impact statement, and it is mostly, well, we plagerise the guidelines to use the index. That kind of general statement, in my judgement, is not very professional on your part and it doesn't advance our indeavour to understand the problem. Specifically, for example, you said you believe at page 12 your material that we did not give adequate consideration to alternate sites, and you cite a specific example of our failure to do so, such as the likelyhood of hydrogeological information with respect to these sites.

Now, you should know and probably do know that if we do not own a piece of land we have no way in God's green earth of going on to that land and conducting any kind of elementary hydrogeological studies, because that involves, as you know, drilling holes on other peoples property.

If your proposition is that we should have gone to seventeen other sites in order that we should be able to do what you consider to be proper hydrogeological studies, then you don't have any understanding of the economics of doing

what we are trying to do. We propose to deal with your specific questions and they will be considered, legitimate questions ad seratium at one of our subsequent meetings, but the kind of general statement which you have made with respect to our failure to follow the guidelines and your colourful statements, whether things are adequate or inadequate, are totally lacking in the kind of professional objectivity one would expect from your department.

DR. WIEBE: If I may answer your remarks, Mr. Grant. Our statement that you did not follow the guidelines refers to the format. If you read the guidelines you will see that they state that the format was such that a description of the project would be followed by a description of the environment in which is was to be placed and to be followed by a description of the impacts. That very simply format, if followed, would present a very clear picture in my mind. It was not followed.

MR. GRANT: That is factually wrong. Do you have a copy of the guidelines in front of you?

THE CHAIRMAN: I think we have heard both sides and I don't think we will

accomplish much by further detail on it. I certainly think the point has been made by both of you. Perhaps we could allow Mr. Wiebe to finish and Mr.Grant, you may have other points you want to deal with.

MR. GINBLETT: I have a point of clarification.

THE CHAIRMAN: Could you wait?

MR. WIEBE: In reply to your second remark, Mr. Grant, the suggestion that hydrogeological information could have been gotten from existing information and existing data ---

THE CHAIRMAN: There is the statement there and we will have to consider it. Do you have any more points, Mr. Grant?

MR. GRANT: No.

THE CHAIRMAN: Mr. Ginblett, did you want to clarify Mr. Grant's clarification of Dr. Wiebe's statement?

MR. GINBLETT: I am a little confused about the site selection. The topic that Mr. Grant brought up. I am sure we all understand there were seventeen sites tested extensively, but one of the things I am confused about is did Eldorado actually obtain an interest or initially obtain an interest in any of the other sites mentioned in the EIS either through purchase or

auction?

MR. GRANT: We didn't obtain any legal interest in any of the sites except one, and the nature of that legal interest was in the form of a contract whereby if we were satisfied with certain investigations we were entitled to complete the purchase.

MR. GINBLETT: Is that one of properties on the other side?

MR. GRANT: No, this was one owner owning a large tract of land.

MR. GINBLETT: Was that the Newtonville site?

MR. GRANT: No.

MR. GINBLETT: You obtained no options to the Newtonville site?

MR.GRANT: Not to my knowledge.

MR. GINBLETT: Did any of your agents?

MR. GRANT: Not Newtonville. I don't think so.

MR. GINBLETT: We will get to that in phase two.

MR. GRANT: I don't know what the relevance of that is.

THE CHAIRMAN: Thank you Dr.Wiebe. Our next speaker is Mrs. Lawson.

MR. GRANT: With respect to my response to Mr. Ginblett's question, my answer was slightly inaccurate. I had in mind that Eldorado had a conditional contract with respect of the property in Millhaven and I have been corrected that our conditional contract was in respect to one large property in Newtonville. That is one owner. I am informed that we did not have options on other properties in that area.

THE CHAIRMAN: Thank you, Mr. Grant.

Mrs. Lawson?

MRS. LAWSON: Mr. Chairman, before I begin, I would like to table a brief which I read to the Porter Commission last June, a reply to Dr. Porter from Dr. Prinz, the Chairman of the Atomic Energy Control Board, a copy of which I received in August and a reply to Dr. Prinz's reply criticizing my reply to Dr. Porter.

MR. GRANT: Is Mrs. Lawson representing herself or are you representing SEAP? We were originally at this time scheduled for SEAP.

MRS. LAWSON: No, I am representing myself. I have already given the panel my scrap book or lent to the panel my scrap book of clippings which documents the events that took place in Port Hope over the past two years. This, I feel,

is sufficient evidence of the track record of the country.

I have a few personal remarks at the beginning, since at least one member of the panel has expressed an interest in how citizens react to the proceedings we are now involved in. Like ninety per cent of those you have heard from, I would rather not be here. I come because of some inner compulsion. It is particularly difficult for me, because I do not like being cast into a role of confrontation with my fellow citizens. The mayor is or was a friend of mine. I would like to feel to phone up Gordon Colburne and ask him for a ride out. I was stuck this morning. But I don't do this. I feel sad at the rift that I have created on a personal level. Stanley Frost was at Port Hope high school not long after I was there. I very much admired his skill as a rifle marksman.

As for the strain that these affairs place upon me personally, yesterday I broke a lamp while vacuuming my dining room. The day before I cracked my best iron stone platter. A friend of mine who was chairman of a local citizens group called Hope that had to deal with the proposal by the SPR and Metro

Toronto to dump thirty box cars a day of Toronto's unsorted garbage in our misdt, simply could not involve herself in another set of hearings. She is interested in this, deeply interested, but she told me that every time she goes back to the Port Hope Legion Hall for a dance or a meeting or whatnot, she gets the most dreadful pain in her stomach. The hearings, the provincial environmental hearings for application to dump garbage was held in the Port Hope Legion Hall.

I think, panel members, that you must realize that had it not been for hours of work on the telephone and personal contact, that your panel on the part of two of us, that your panel would probably received eight or ten briefs.

I also wish to tell you that you could not have chosen a worse month of the year to hold these hearings with the possible exception of May. The people directly involved are in the process of earning their years income, bringing in their harvest. It has been exceptionally difficult for them to come both here and to deliver their thought in this month of September or October.

I also wish to tell you that I

find it inceasingly difficult to see myself as the raw material by which Brian Timmermans and the CBC make a living. Especially when we have to stretch our personal resources to do it.

I will begin my brief.

SUBMISSION BY MRS. PATRICIA LAWSON:

"The two worlds of man - the biosphere of his inheritance, the technosphere of his creation - are out of balance, indeed, potentially, in deep conflict. And man is in the middle. This is the hinge of history at which we stand, the door of the future opening onto a crisis more sudden, more global, more inescapable and more bewildering that any ever encountered by the human species and one that will take decisive shape within the life span of children who are already born." (1) This is a quotation from Barbara Ward, the British economist who, you will remember, called for clean water and a halt to nuclear power generation at the United Nations' Conference on Human Settlements last May.

Our market economy and our consumer-oriented society are causing rifts in communities and in our world. I question the premise that industry should maximize its profits while ensuring that someone else pays the cost of the waste.

I find it especially reprehensible when the ones to pay the cost have not had a chance to reap any of the benefits. Some of us are beginning to believe "that our economic system is fundamentally ill founded and wrong-headed. (2) "Eldorado's proposal smacks of the worst characteristics of this system."

Dora Nichols and Marjory Ashby are the real people of our country. They know what it is to live as a community. Destroy their livelihood, their way of life, and you destroy the fabric of our society.

Is it really in the interests of the people of Canada to allow this profit-oriented proposal to proceed? What is the purpose of a Crown Corportation? Is it to make money or is it to serve the people and the country (safety). Obviously, a combination of the two is preferable. In the Port Granby Proposal you have not only no service, but a negative effcet upon the people and the environment and no guarantee of safety. The only concern is profit. But the industry is owned by the Crown. The proposal must be defeated.

The stakes are too high. Perhaps this new plant will not make money. Perhaps there

will be no foreign market for uranium, hexafluoride (as Professor Carter and others have suggested). "Since the beginning of the year, Canadian uranium destined for Japan under contract has been piling up in Canada because the two countries have failed to reach accord on a new nuclear cooperation agreement.

(3) What assurance have we that there will not be even stricter regulations in the future as more and more countries buy the reactors which they can then use to produce weapons' agrade plutonium (i.e. India.)

If Eldorado has no sales, the Company will have to stockpile as they did in the 1960's (when the market in the USA fell out) and we the taxpayers will bear the double burden of financing the new plant and then having to buy tack the product in order to keep the industry alive. And, what is worst of all, we pay for hundreds of years of waste. We pay for it in many ways: a) in the destruction of Ontario's best farm lands, b) in the destruction of a rural community, c) in the poisoning of our land, our lake and our future. And what have we got? Perhaps not even a boost to the economy.

There has been in the last years a

sudden vast increase in thestrain on air, lake and land which by and large continue to be used as "free goods" by industry still able with little cost to dispose of unlimited and lethal waste. Future governments (and, if the Science Council of Canada is any indication, this may not be far distant) will require business to include in its total costing of a product its impact on the environment and whether it can be recycled. Since UF_6 can never be recycled, Eldorado might go out of business.

In the arena of international sales, the peaceful uses of nuclear materials cannot be separated from the destructive uses. India exploded a nuclear device after obtaining much of the necessary nuclear technology from Canada. The ability to build nuclear weapons is spreading from nation state to nation state. When this proposed uranium hexafluoride is enriched in New Jersey it will then be sold to foreign countries subject to Canadian safeguards. In transit there is always the possibility of an accident, or an act of malice. What protection do we have against this? Some people say that the sale of uranium abroad is a disguise for the arms race. Can we, as a responsible nation, take this kind of risk? The Fox Report (Australia) questions the social and

ethical consequences of the proliferation of nuclear generating stations, as does Sir Brian Flowers (U.K.) in a Roay Commission Report.

Since I first learned through the media something about radiation and the problems in our town, I have had a real concern about the high levels of radium, uranium and arsenic seeping from the two dump sites into Lake Ontario and the level of 7pc per litre recorded in the Port Hope Harbour by the Great Lakes Water Quality Board (and reported to the International Joint Commission at their meeting in July, 1976.) Scientists tell me that the contaminants are sufficiently diluted by the lake and that sampling in the lake meets the province's safety level of 3 pc. per litre. I know that we drink this water, that we swim and boat in it. Three summers ago my children took part in a sail training programme; they dumped their boats and swam daily in the harbour. Knowing wat I do now, I would not have allowed this. Safe? What is safe with a poison that is carcinogenic, mutagenic and that builds up int the body lodging in the organs. We are not dealing here with a substance that can cause a bilious attack, even sudden death - this is a faceless monster whose ravages may be visited upon the third and fourth generations.

Some questions about the lake haunt me. How far does radium travel in the water? Last spring Port Hopers were surprised to learn that the smelt in Gages Creek and the Ganaraska River had a higher quantity of mirex poison than any smelt tested along the north shore of the lake. Mr. Kerr (the Province's Environment Minister) told us that the source of this chemical was a U.S. industry on the Niagara River. What factor do winds and currents and heavey rains play in moving these poisons around? How does one chemical relate to another in the human system? Could not the total impact exceed by exponential amounts the initial intake? Further, who would have suspected eight years ago that D.D.T. sprayed in Southern Canada would directly cause the near extinction of the Baldheaded Eagle breeding in the Yukon and Mackenzie delta? The build-up of radium and uranium in the food chain disturbs me. "Some fish will concentrate the level of radioactive phosphorus - 32 in their bodies to more than 100,000 times the concentration in the water." (4) Will the smelt eaten weekly by my family cause cancerous breakdowns for my children in the later life?

The standards - how can we trust them? The federal standard differs from the

provincial; there is a wide difference between countries and over the span of years. The United States has recently limited the allowable whole body does to a member of the general public to 25 millirem per year - 20 times below the Canadian limit. In Port Hope when we began to understand what it was all about, the level was set at 7 pc. per litre, then it gradually came down to 3 pc. per litre. Safety levels are the result of a value judgment as seen in the I.C.R.P. (International Commission on Radiological Protection) stipulations.

There is still a wide range of expert opinion on the hazard of radiation to human health and no one yet knows how to dispose safely of radioactive waste.

Perhaps this is the readon for increasing public distrust - a conscious refusal to accept the benefits of the industry when it means also an acceptance of the waste. Whether this distrust is legitimate or not I do not wish to debate - the fact is it is evident in mass rallies and demonstrations aroun the world.

There is also, I detect, a big change taking place in the hearts and minds of people - a questioning of growth and technology and the economy as the ultimate values - a far greater

understanding of man's place in his environment and a willingness to consider ourselves as stewards rather than as landlords on this earth. This attitude leads to an emphasis on conservation and renewable energy sources. It also leads to a sense of responsibility and commitment to our neighbour and to the community. That is the sole reason that I have involved myself in this difficult subject over the past two years. Whether we like it or not, we are responsible for the future - not only of ourselves but of our societies and, finally, of this earth.

THE CHAIRMAN: Thank you, Mrs. Lawson. Any questions of Mrs. Lawson by the panel?

DR. BIRD: Mrs. Lawson, I would deduce from your comments that you would be opposed to the plant located anywhere?

MRS. LAWSON: Yes I would.

DR. BIRD: Why?

MRS. LAWSON: I wasn't originally. It is only in the past two years that I have come to this understanding. I have lived all my life in Port Hope and for forty-five of those years I was very proud of the fact we had, when I was a child, we had the only uranium refinery in the

world outside of the Belgian Congo. This was a mark of prestige for the town. I wrote a project on it when I was in high school.

DR. BIRD: Have you some observations or thoughts that you could leave with the panel concerning the existing dump site at Port Granby, if, in fact, the project itself does not go ahead?

MRS. LAWSON: The Control Board has stated publically that it will be removed.

DR. BIRD: I am not aware that there was that decision. I understood they were given an extention for a licence, but I don't think, although Mr. Grant has tabled the the copies of the licence extention, I wasn't aware there was a statement that they were required to move the dump site.

MR. GRANT: If they made that statement, they forgot to tell us.

DR. BIRD: Apparently it has not been stated that way. What do you feel about it? You feel it should be removed?

MRS. LAWSON: I am going to bring you this afternoon some documentations from the Control Board relating to their extention to the licence and to what they require the company to do. I personally am very unhappy at the situation where such high amounts of radium, arsenic and

uranium are seeping through the groundwater. One of the briefs that I read, I think it was in the one the Department of Energy, Mines and Resources, there was a question of the geology, the ground in Port Granby, as to whether that was the right type of area to locate this contaminants.

DR. BIRD: The property that is there is under Eldorado's control at the present time and, let's for the moment assume that the waste disposal portion of that property is to be disposed of either through satisfactory techniques which are considered to be acceptable or removal, but there will be the rest of that property. Do you have some observations and views with respect to its utilization? The remaining property, the six hundred and thirty acres, take away the current waste disposal site, and assume that the plant does not go ahead. There will be that land. You have heard quite a number of local residents say very clearly that they felt it should be reserved for agricultural purposes.

Another option is for further urbanization or further industrialization. Do you have some observations and views on that?

MRS. LAWSON: I feel very strongly it should be reserved for agriculture. It is

class one land. Further more, it is adjacent to markets and the climate is suitable.

THE CHAIRMAN: Any questions from the floor?

MR. VELDHUISE: This is not a question, Mr. Chairman. I would like to clarify something that was in the request here. I was at the meeting where Mr. Spence from the Atomic Energy Control Board talked to a group of local citizens and I can't recall the exact date but it was in that brief of mine and it was November or December of last year. At that time he stated that the material on the dump would be removed and we asked him to repeat that, because I was shocked, you know, that that is the first time I heard of it. He repeated it and we then called Mr. Jenkins, and Mr. Prinz, the President of the AECB. We made those two gentlemen confirm the statement by Mr. Spence that the material would be removed. I apologize to Eldorado that I never informed them of that fact, but that was the situation.

MR. GRANT: We have not received any formal notification to remove material, and in fact, we are studying at the request of the AECB, what we euphemistically call decommissioning.

THE CHAIRMAN: I don't see a

great conflict here in the way that the AECB can not remove it until they resolve how they will remove it and where they will put it and that is understudy. I think probably all the statments are compatable.

MR. VELDHUISE: They have to be weighted, because our first indication was it was going to be cleaned out tomorrow and we realized that that's not so, but eventually, that is the intent of the AECB, which is that it be removed eventually.

THE CHAIRMAN: We have another question.

MR. CARL ROSE: I was interest in comments about varying degrees of so called safe or allowable levels around the world. Yesterday afternoon Mr. Parsons from the Atomic Energy Control Board was here and I asked him the question, you know, I asked him are the AECB safe or allowable levels the same as those of the UN, the US, and the UK etc? His answer was that they were the same -- I didn't get the name, but some international nuclear association. He said Canadian standards are the same as those. Them Mr. Grant clarified and said in some cases Eldorado's standards are even higher.

Is your information up to date or is Mr. Parsons correct or is it more complicated and he couldn't answer it in such a short time.

MRS. LAWSON: He was probably referring to the ICRP, the Internation Commission of Radiological Protection, and there is a quote from Dr. Prinz to me about that. This I think will settle the matter for you that there is no disinitive standard.

He says:

"The suggestion of limiting dose rates is interesting, however receive scat support from the ICRP which recommends a system of annual dose limits coupled with the injunctions that, one, all pratices involving radiation should have a positive net benefit; two, all radiation exposures should be as low as reasonably achievable, social and economic factors being taken into account."

MR. VELDHUISE: You mean they don't actually give numbers?

MRS. LAWSON: No. Those are the guidelines. So, it is up to each society or

each country, I mean. If they put a value on energy above human life, then they will set the standards higher. If the value of human life and the possibility of danger to human life more, then they will probably set the standard a little lower. That's the way I see it. It is a complete value judgment.

THE CHAIRMAN: Any further questions? We have one more speaker scheduled.

MR. GRANT: Mrs. Lawson, I have the information that you live in Port Hope. I assume in view of what the mayor of Port Hope said in reminding the panel of the unanimous resolution of the town of Port Hope, which reads as follows:

> "The Coucil of the town of Port Hope supports Eldorado Nuclear's plan for a new refinery and processing plant in the Town of Newcastle."

Now, I assume that the mayor is authorized, being a properly elected official, to reflect the views of the citizens of Port Hope a little more compitently than you. You are reflecting your own views only, as you said in the beginning.

MR. LANG: Speaking as a panel

member, Mr. Chairman, Mr. Grant can assume what he wants to assume. I assume that the Council does not necessarily get elected on a platform to represent the views of the citizens on this particular issue and they may have certain knowledge that you do not have about what citizens on the whole believe and you may have some that they don't have. I regard both of these as legitimate inputs to my own deliberations. I find that a strange comment.

MR. GRANT: I don't think it is, Mr. Lang. We are concerned with the attitudes of the neighbours, Port Hope, and my concern is that the comments that the lady has presented so elequently, not be interpreted as being, in any way, shape or form, as being reflective of the attitude of the people of Port Hope.

In fact, as you know, we filed with you an attitudinal survey at the request of some of the panel members. This individual, who happens by chance to live in Port Hope, should not in my view be viewed in any way as an intelligent reflection of the views of the people of Port Hope. That subject was brought to your attention quite properly by the duly elected officials of Port Hope.

MRS. LAWSON: Could I respond to that?

THE CHAIRMAN: No, Mrs. Lawson. I think the whole entire panel respects your right to present your views and we accept it and we prefer not to get into debate. I think there are some in Port Hope who feel one way and some who feel another way. There may be some people in Port Hope who may not feel anything.

MR. GRANT: You say there were high levels of radium, arsenic and another chemical.

MRS. LAWSON: Uranium.

MR. GRANT: Seeping out through the dump site. Are you saying that that is happening now or that was happening before the installation of the water treatment plan?

MRS. LAWSON: It is recorded by the company's, your client's scientists in Geoffrey Knight's report, which was tabled in July of 1975. The only up to date information I have comes from Dr. Durham who, as you know, was asked by the control board to test in June of this past year.

MR. GRANT: Yes, and what did his figures show?

MRS. LAWSON: Well, perhaps he should speak for himself. He is here.

MR. GRANT: You are the one that said that there are high levels. Are you saying there are now?

MRS. LAWSON: Dr. Durham told me that areas close to the shore were the streams showed high levels of radiation.

MR. GRANT: And when did he make his tests of it, before or after the installation of the water treatment plant?

MRS. LAWSON: Well, obviously it is after, if it was done this summer.

MR. GRANT: You said he made a report in June of 1975.

MRS. LAWSON: You didn't listen, Mr. Grant.

MR. GRANT: I always listen. I don't always understand.

MRS. LAWSON: I will go back and say it again. My estimates in my brief are based on Geoffry Knight's report which was compiled in July of 1975 and he used you client's scientists' figures.

MR. GRANT: That was clearly before the treatment plant.

MRS. LAWSON: My up to date information comes from Dr. Durham who is here and who has tested the lake water and which he finds meet the provincial standards, but who is concerned about the seepage seepage of water through the water table at the dump site and right into the cliff area of the dump site. That testing was done this past summer.

MR. GRANT: Do you know when this summer? When was the testing done?

MRS. LAWSON: It is stupid for me to reply when Dr. Durham knows it all.

MR. GRANT: You made the statement. I would like to know whether you are saying now the levels are too high or not. It is a very simple question.

THE CHAIRMAN: Is Dr. Durham prepared to clarify when he carried out these tests?

DR. DURHAM: I think I can clear it up. We carried out the analyses, the surveys during the month of June. The report was issued in August. The actual damming of the streams had not been completely completed. I think the highest level was seven pc. per litre, close to the old amounts of the west creek. By the time

we got out it was twenty-five to fifty, and then it dropped back down again. The nitrate followed these concentrations very similarily.

MR. GRANT: So, then, Dr. Durham, you are saying that you didn't, in fact, do any tests after the treatment plant was functioning?

DR. DURHAM: The dams were in place and we were not a hundred per cent certain that there still wasn't some water coming down the west diversion, but there was no water flowing across the beach into the lake.

MR. GRANT: We didn't actually start operating the treatment facilities until August. Your tests were done in June.

DR. DURHAM: Yes.

DR. DEROW: I am not sure to whom to direct this question, but are we going to have information on these levels, current information on these levels instead of this sort of evidence before us?

It seems like it is a serious defficiency.

DR. DURHAM: That report is, in fact, in the hands of the Atomic Energy Control Board and anyone can get a copy.

DR. DEROW: A more current report?

DR. DURHAM: Right.

DR. DEROW: With readings done ---

DR. DURHAM: In June.

DR. DEROW: I am saying are we going to be able to obtain something more current, because there is a debate about whether, in fact, those readings reflect the protective measures.

DR. DURHAM: We are not planning any further studies.

DR. DEROW: Mr. Grant, is your client prepared to provide information to verify the information that we have that this was done too early and your remedial facilities were not in operation?

MR. GRANT: Well, I can provide the report in response to the last question, the very last question, a statement of fact made Eldorado that in June of this year the water treatment facility was not functioning. That is clearly an incontravertible fact. I am told we do not have a copy of the report to which Dr. Durham refers, although it may be within Eldorado and we will look at it. I don't know to what extent the reports are available today of our analysis of the water since the introduction and implementation of the water treatment plant.

I think there are some and I think they showed substantially reduced levels on the other part. I will try to obtain those reports if they are available. If so, I will provide them.

THE CHAIRMAN: If there are no further questions of Mrs. Lawson, we have one more speaker, Mr. Whitney. Mr. Whitney, I will leave it to you to decide if you would like to speak now or at one thirty.

MR. WHITNEY: I would like to speak at this time. My name is Richard Whitney and I am a citizen of Port Hope. In light of the 1976 radon gas expose revolving around the Port Hope operation of Eldorado, my concern regards the adverse phycological effect, the continual bombardment of propiganda both pro and con concerning the proposed establishement ofthe Port Granby refinery, and the effect it has had on people in the vicinity of Port Hope and Port Granby.

After thousands and thousands of words of testimony, the decided believe still exists that serious environmental and health hazards to the populace will occur, if this uranium refinery is built.

If this project is not abandoned,

I fear for the safety of people, especially officials of Eldorado who will be responsible for having it built. Thank you.

THE CHAIRMAN: Thank you, Mr. Whitney.

MR. GRANT: In what way do you fear for the safety of the officials of Eldorado?

THE CHAIRMAN: Would you like to come back?

MR. WHITNEY: Well, I base my conclusion on the universal law of nemesis, that evil doers are ultimately punished.

MR. STEVENSON: I would just like to say to Mr. Whitney. When I came in, you were shooting off at great lengths making very disparaging remarks and you enlarged on all the people connected with Eldorado. I took exception to that, because they were not in your presence and I would take exception to them if they said the same thing out of your presence.

THE CHAIRMAN: If there are no further points of clarification, we will adjourn until one thirty.

---Whereupon the hearing adjourned.

Page 1202 follows.

Newcastle, Ontario
Thursday, October 6, 1977

---On resuming at 1:30 p.m.

THE CHAIRMAN: Would you like to take your seats, please, ladies and gentlemen? Good afternoon, ladies and gentlemen. My name is John Klenavic. I am the Chairman of the Environmental Assessment Panel. I usually make an opening remark to explain what we are all here for. I see mostly familiar faces in the audience and I think I would just say that we would like the intervenors to speak on the subject for a maximum of fifteen minutes each to be followed by questions from the panel. If any of you people have not been here earlier and would like to ask more questions about this, we would be pleased to answer them at coffee break.

Another point I would like to mention is that it has been requested there be no smoking in this room or in the adjacent room where the coffee is served during the afternoon and evening.

Before we begin with our first speaker, those of you who have been following the proceedings will know that we had eight members on

our panel and right now we have seven. This morning Mr. Murray Duncan made the following statement:

"As you are probably aware, I am on the staff of the Atomic Energy Control Board which is a regulatory agency which has the ultimate responsibility for licensing the proposed Eldorado facility. My normal duties are related to the regulation of facilities in the nuclear cycle. I have been involved in safety assessment of such facilities for over fifteen years, both in private industry and in government, and it was because of this experience that I was appointed to this panel.

"I felt satisfied personally that I could divorce myself sufficiently from my regulatory responsibility in order to participate in this panel's activities with a sufficient degree of objectivity. I firmly believe in the need for the utmost objectivity in this very

crucial phase of the regulatory process in order that the concerns and critiques of the public and the various agencies involved can be adequately factored into the regulatory process.

"My observations over the past two weeks which have included discussions with the members of the public and other panel members have led me to conclude that because of my association with the work of the AECB, my presence as a panel member has inhibited the kind of dialogue between the panel and the public which is so essential to a well balanced report on the part of this panel.

"I have informed the panel members of my conclusions and I indicated to them my decision. I would like to now announce publicly that I have decided to withdraw from the panel in order that these encumbrances I have mentioned can

be eliminated and the most objective interchange can occur between all participants which is what we all desire.

"I would like to point out that this is my own decision and not one influenced by my management or other agencies. In discussion with the panel, it was agreed it would be most appropriate if I were to withdraw from the panel at this time. I accept this decision and I will step down immediately and so advise the Executive Chairman of the Environmental Assessment Panel in writing as soon as possible. Thank you."

-- which is a quick lesson in why the panel is now seven members. I might introduce quickly Dr. Ellan Derow on my right, Peter Bird, Kim Shikaze, on my left; Reg Lang, David Acott, Clement Cheng and Mr. Warder who is the Secretary who, along with Brian Timmermans at the far end, are available to provide information on any other points you may have.

I think I have described everything else. The

gentlemen from Eldorado on the right, the Court Reporter and table for the intervenors on the left and representatives of the media behind the little fence. I am not sure if that is symbolic or not.

This afternoon we have on our list the Ganaraska Trail Association, Mrs. Joan Woods, Professor Horst Wittmann, the Town of Newcastle, Mr. Bruce Laird and Professor Paehlke. We can proceed now to our first speaker, the Ganaraska Trail Association. Are they here? It appears that the Ganaraska Trail Association is not here at this time. We might proceed to our second speaker who is Mrs. Joan Woods. Would you like to use the table at the front left?

SUBMISSION OF MRS. JOAN WOODS

MRS. WOODS: I would first like to mention that I am not speaking as the representative of any group or organization. I am here becuase, as a mother, I bear the primary responsibility for the well being of future generations. Mr. Klenavic's letter to households in the area states:

> "Your participation in the hearings will mean that the final recommendations of the Panel will reflect the opinions of those most likely to be affected by the

refinery, should it be constructed."

I, therefore, see no reason to represent myself to the Panel as a technical expert.

But, let's face some hard facts. Even though this panel is part of a democratic process and even though the larger issue of Nuclear Energy is a political one, the decision on the Port Granby refinery rests on the interpretation of technical data. Therefore, I have attempted to read through the EIS and most of its two appendices. In reading these I have had to make the basic assumption that the facts tabulated by James F. MacLaren Ltd. are accurate as I have no means of testing them. I would like to present my main areas of concern and questions that have arisen from the EIS.

According to Appendix II, the second phase of the study began in September, 1975 and Port Granby was added to the list of possible sites some time after that. Now, in July 1975 the AECB inspected Eldorado's waste sites, including Port Granby. We also know that the AECB requested specific changes at the Port Granby site in the summer of 1976. On page 2-5 of the EIS, the company states, and I quote:

"An integrated refining and waste management complex at the Port Granby site would make it possible to accomplish the objectives of both the company and the AECB in a more efficient manner than would be the case elsewhere. Among many other factors considered, it was felt that management of the existing Port Granby disposal site could best be assured through the presence of the company on that site in an active operational capacity."

My question is, does this last statement indicate that when the site was being selected undue weight was given to the convenience of combining the two operations? In other words, except for this convenience, would any other site have been more suitable? Also, the company maintains that having an operational refinery on the same site as the dump assures better waste management, yet the life of the refinery is seen as only 15 to 30 years. If we can do without the company's active, operational presence in 15 years, why can't we do without it now? Shouldn't the waste disposal site be managed by persons concerned

with safety and not with production quotas?

My next area of concern involves the regulatory function of the AECB. The following is from the EIS, page 3-48, and it deals with waste on the present Port Granby site:

> ". . . the disposal site contains long-lived radioactive material that will not decay naturally to acceptable levels before natural erosion could expose the waste and eventually deposit it in Lake Ontario."

Now, surely the technology was available 22 years ago to analyse the unsuitability of the Port Granby waste site! Why wasn't this done? Why were several Eldorado waste sites allowed to assume the careless state observed by Knight in his July 6, 1975 report to the AECB? For example, the fence at the Welcome site was broken down for a distance of 100 feet. Water samples at the pumphouse showed radium concentrations ten times higher than acceptable limits. This is from Knight, sections 1.4 and 2.2.

Also from the EIS, page 3-49, (you can also see page 5-11):

> "More testing is planned to quantify the various types of

materials, to determine the moisture content and to assess the penetration of contaminants. This testing will also be used to ascertain the best methodology to employ for excavation, transport and redeposition of the waste in the new waste management area."

As this "redeposition of the waste" is supposed to be a primary concern of the project, should we not know more about the above testing and methodology before a decision is given?

I am also concerned by the admitted dependence on Lake Ontario for dilution of effluents. You can see EIS, page xxxi, but on page 4-75, I quote:

"However, a review of operations at the existing refinery indicates that there is a potential for short-term upsets in the process primarily as a result of occasional equipment failure or operator's error. Improved process control and routine effluent monitoring in the proposed new plant should reduce the upset

potential. Nonetheless, the effluent will be discharged offshore where dilution and currents will minimize any potential impacts."

The first question: When Darlington is built without an environmental impact study having been done how will we know what the combined effects of the effluents from Pickering, Darlington, Port Granby and Port Hope might be? Secondly, shouldn't you have a look at the existing Port Hope refinery?

Next, there is one pollutant that everyone will be able to see and recognize, the 50 or so trucks each day for the two-year construction period. Those are mentioned in the EIS on page 6-29.

My final question involves the brief mention in Appendix II, page 1-1 of refining "foreign" yellowcake. Will the refinery be handling yellowcake from other countries? I had understood the objective was to refine Canadian raw materials.

I apologize for not having had the time to do all the background reading necessary for a more thorough examination of the EIS. Also, instead of a summary, I should like to submit the front page of yesterday's Port Hope Evening Guide which shows the difficulties Port Hope has been

facing -- threats to health, economic loss and most seriously, the polarization of the townspeople.

Thank you. (Applause)

THE CHAIRMAN: Thank you, Mrs. Woods. Any questions from members of the panel?

DR. DEROW: When you mentioned the polarization of the townspeople, I don't know if that article contains very much information on it but from your own personal point of view, are all citizens taking views?

MRS. WOODS: For myself it is probably not as great a problem as it is for someone who had lived in Port Hope all of their lives. I think they are more keenly aware of where the lines are being drawn. I personally do not know many of the people who either work for Eldorado or are definitely in sympathy with their problems, but I find it extremely upsetting to come to a meeting like this and discover that there are definitely two sides, that it is them or us, and the feeling that anyone who speaks out on this issue is a "new kook" and people who do not have the technical background have no right or have nothing to say on this issue.

DR. DEROW: Could you describe

how you got that feeling?

MRS. WOODS: I got that feeling as of the very first environmental hearing when someone from Eldorado walked through the crowd and remarked "This meeting was really just to let people vent their feelings and their emotions".

DR. DEROW: Is the polarization centred upon those who are dependent upon Eldorado to make a living?

MRS. WOODS: Yes. I think if you examine this page from the newspaper, you can, of course, in reflecting on what the Mayor of Port Hope said yesterday, you realize that the economic considerations are probably the most important and that those who feel they have a vested interest are most likely to defend Eldorado.

DR. DEROW: Could you possibly describe from your personal point of view your subjective opinion about what the ratios are in terms of this polarization you are describing?

MRS. WOODS: It is very difficult because there are still even now after three years of difficulty over the radon cleanup, many people in Port Hope who have either not come to grips with the problem or have ignored it and

I think that we would have to probably take these people into account as well.

THE CHAIRMAN: Any other questions?

MR. LANG: You asked a number of questions in your brief, but I would just like to clarify one of them. Perhaps someone from Eldorado could tell me what is the portion now of the yellowcake that comes to your refinery from outside the country?

MR. GRANT: Right now we have an embargo, but subject to that, it is roughly ten to fifteen per cent of our production is in processing foreign-sourced yellowcake.

MR. LANG: Do you anticipate that being more or less the same in the future if this operation is approved?

MR. GRANT: Mr. Dakers can answer that.

MR. DAKERS: We anticipate that when the refinery is built primarily for the processing of Canadian material, depending on the production rates of Canadian-sourced uranium and our competitiveness to bid for foreign material in the early years, that may be a possibility, but the plant is not being designed on the basis of

foreign feed stock.

MR. LANG: One other question, why would you have any foreign feed stock?

MR. DAKERS: We are in the refining business. We have successfully competed in the past with the other six in the world for converting yellowcake to uf_6. Certain countries who have uranium production do not have uf_6 conversion facilities. It is a profitable business. We attempt to make a profit out of this business.

DR. BIRD: Mr. Chairman, I wonder if I could pursue that line just a bit further? If I recall correctly, most of the contracts that Eldorado has are with an end user who buys his own yellowcake and asks you to refine it, to put it into uf_6 format, to take it to a fuel fabrication plant and then onto the end user. Could you just clarify for me the relationship? Who do you in fact ---

MR. DAKERS: Our customers are electrical utilities who purchase yellowcake from the various producers. We do not at the present time process all Canadian uranium for foreign utilities. Some material is in fact imported on old contracts and is converted by uf_6 converters in

other countries, but our basic contracts are with the utilities.

DR. BIRD: They have their own means of seeking competitive prices from the different raw material suppliers and they buy their yellowcake from wherever they can get it most cheaply?

MR. DAKERS: That is correct. In Canada the government policy states that we should attempt to export uranium in its highest processed form, provided that it is at a competitive -- it is competitive with other world converters. We presume we would be competitive and, therefore, we would process all Canadian uranium destined for export in the future.

DR. BIRD: In the hope it would be sufficiently competitive for the utilities that want to buy it here because the transportation costs would be less and so on?

MR. DAKERS: Our processing would be competitive with any other particular competitor.

DR. BIRD: Is there a significant difference in the chemical composition of the yellowcake coming from different sources?

MR. DAKERS: Yes. In Canada the majority of the material is similar in type to what we have shown in the EIS as so-called ammonium diurinate. Our own particular Beaver Lodge produces a sodium diurinate, has sodium in it rather than ammonia, so there are the two main different types of yellowcake produced. There have been in the past small quantities of magnesium diurinate produced. We have some indication because of environmental constraints that this particular type of material may not be used in the future.

DR. BIRD: Is that from foreign sources or Canadian?

MR. DAKERS: Primarily Canadian.

DR. BIRD: What about the material coming from foreign sources?

MR. DAKERS: Primarily ammonium diurinate and some sodium diurinate.

DR. BIRD: In terms of impurities and radium content and so on, this is about the same as the Canadian supply?

MR. DAKERS: The radium content can vary, depending on the process, and also depending on the individual plant, the individual producer, how he does his individual process. This

can vary. I think in the EIS we stated the material contained 300 picocuries per gram. That will vary in Canadian producers from 20 to 300.

THE CHAIRMAN: Are there any further questions of Mrs. Woods? Peter Bird?

DR. BIRD: Mrs. Woods, if I could just ask a question of you. You have done a very commendable job indeed, going through that EIS statement. I noted with some interest you identified a number of passages that I also took a particular look at. I wonder if you would care to state a view about the whole concept of the plant, rather than looking simply at the adequacy of the Environmental Impact Statement? Quite a lot of people expressed their views on that. Would you favour or be supportive of a no-go decision as to the plant, regardless of where it is located, or are you largely concerned because of the inadequacies as you see them in the Environmental Impact Statement and once they have been rectified you would be happy enough to see the plant go ahead? What is your position on that?

MRS. WOODS: It is my personal feeling that the new plant, once the inadequacies that have been described by other people, for instance

the Ministry of the Environment and the woman from Health and Welfare, once they have been satisfied, I feel that the refinery at Port Granby could probably be run much more safely than the existing refinery in Port Hope. My concerns are personal concerns right now, with the condition of things in Port Hope.

THE CHAIRMAN: Thank you, Mrs. Woods, for your presentation. I understand -- Mrs. Woods, would you like to come back? Mr. Grant has a question.

MR. GRANT: I have two questions. I am not suggesting you are making this suggestion, but you indicated last night or earlier in the hearings some person from Eldorado said that it was his view, or Eldorado's view, that the purpose of this hearing was to enable people to vent their emotions. Did you personally hear that?

MRS. WOODS: Pardon?

MR. GRANT: Did you personally hear an Eldorado person say that?

MRS. WOODS: Yes. There was a large group around the Eldorado table at the time. If I knew the man's name, I would tell you. He was sitting at the table.

MR. GRANT: Sitting at our table? Let me tell you quite clearly, we will deal with that, if it is a concern on your part. It is not Eldorado's view that this is simply a forum to enable people to vent their emotions. We would not have gone to all the trouble we have ---

MRS. WOODS: I am sorry if I gave the impression that was Eldorado's policy. I was trying to speak on a personal level. I was asked to describe the polarization that is going on in Port Hope and I was talking about individuals and I found at a personal level that this is true.

MR. GRANT: That point is probably a valid one. Were you saying there is something wrong with the operation of the existing refinery at Port Hope?

MRS. WOODS: I don't know. I would like -- I feel, in light of what has been going on for the past two years, and especially after I read the Knight report and description of the waste sites, I feel that the regulatory agencies should pull up their socks and get busy. I am just wondering what was going on up until 1975. All of a sudden things went from security to insecurity in Port Hope.

MR. GRANT: I just wanted to clarify that. You read Mr. Knight's report relating to the operation in Port Granby and not Port Hope?

MRS. WOODS: I stated that.

MR. GRANT: I thought you stated you felt there was something wrong with the operation of the refinery, as such. Can you tell me what is wrong, as far as you know?

MRS. WOODS: I am concerned that I understand now there is an exclusion area to be required by the AECB and I am wondering if the exclusion area, if it were applied to the plant in Port Hope, are there any dwellings within that exclusion area right now?

MR. GRANT: Let me clarify this for your benefit. The concept of the exclusion area zone is not anything in any absolute terms. The concept of the exclusion area zone, I don't know if you were here through the whole hearing but regardless of what point you pick, whether it be 1000 meters or 100 meters or 50 meters, so long as it is at that point of the boundary of the property of the exclusion area, you satisfy the radiation requirements of the Atomic Energy Control Board, and that is all you need to do.

At Port Hope there is no suggestion that at the boundary we are not meeting those requirements so I think it would be impossible to conceive of an exclusionary area beyond what we are now doing there. My question is: do you feel that there is something we are doing in Port Hope in the refinery, as such, which is of concern to you? You may not like the idea of a nucelar refining operation generally, but specifically, what are you worried about?

MRS. WOODS: I would be interested to have an impartial review done of the whole situation because I feel that right now we have nothing to go on except innuendo and rumour. It would be interesting to have an impartial evaluation of the present operation.

MR. GRANT: Are you aware that the Automic Energy Control Board, as our regulatory agency, in fact regulates almost the day-to-day performance of our operations in Port Hope?

MRS. WOODS: Where were they up until 1975? I get the feeling that when they finally went around in 1975 and inspected the waste management areas that the situation was not

wholly satisfactory, to say the least. Why was the AECB so long in picking up on things like poor fencing, poor signs?

THE CHAIRMAN: I think you have stated your concerns and I could perhaps dwell on it, but it might be a fairly lengthy discussion.

MR. GRANT: With respect specifically to the waste management area, I know your concerns there, but is it your answer that, with respect to the operation of the refinery itself, you personally are not aware of any defects, or have anything against the present operation in Port Hope?

MRS. WOODS: I have no means of having any personal information.

THE CHAIRMAN: Thank you again, Mrs. Woods.

I understand the Ganaraska Trail Association is now here and they would like to speak now.

SUBMISSION OF MR J W L GOERING - GANARASKA TRAIL ASSOCIATION

MR. GOERING: I apologize, Mr.

Chairman, for being late. The time that I have had to prepare this brief has been somewhat limited and I am actually representing myself, rather than the Ganaraska Trail Association, if that is all right.

THE CHAIRMAN: Could you state your name?

MR. GOERING: My name is Goering and I live in Port Hope and I am a school teacher. I have been teaching at Trinity College School for sixteen years. I am a professional engineer. I have worked in the industry for 12 years before starting to teach and I have been involved with ecological and environmental matters for ten years.

The brief that I would like to start here will be perhaps a little disjointed, for which I apologize in advance. The time which is allowed for this sort of thing, I recognize the information came out a long time ago, but one of the things that I found out about going to hearings, and I have been to a number of them and presented a number of briefs, so far I have been paid not one red cent for any of the time I have spent on this sort of thing and I would like to feel that this is the same with the so-called opposition. Somehow I think there is a slight, maybe 100 million

to one ratio there. This seems to me unfair. The Berger Commission was able to give people money so that they had time to provide briefs. The Royal Commission on Electric Power did the same thing. With all due respect to the panel, because they have their limits as far as the hearing is concerned, they are not allowed to provide people with money if they don't have any. However, I think that the SEAP group which put forward the statement already in which they said they were not able to find money and just listening to the last few comments about questioning by a presumed expert of Eldorado, for somebody who doesn't work for the company to have the company work, doesn't seem to follow.

To move on, the local effect of a refinery of any sort is bound to affect the air. The Eldorado Refinery at Port Hope affects the air there. There can be no doubt whatsoever about it. You can see it, therefore it affects the air. In the United States at the Four Corners plant at the corners of Arizona, New Mexico, Utah and Colorado, they thought they would pull a smart one and put in some coal-fired plants down there because the air -- there was nobody there to notice the pollution. They have since wakened up to the fact this could no

longer go on. It is interesting that the oil-fired Westleyville plant at Port Hope, the Port Granby Uranium Refinery would be upwind of Port Hope. There is no doubt whatsoever there would be some fallout in the air. The degree is not important. The very fact that there is water being polluted to any degree is wrong. We have already had the International Joint Commission on the Great Lakes indicating that there are a number of places around Lakes Ontario and Erie which have got to do better. Port Hope or Port Granby are no exceptions. The loss of land to agriculture is again obvious. It doesn't matter how much land you actually use if you own a whole lot more. This is being taken out of agricultural production and don't tell me that people don't understand that the population in Ontario is still growing, that we still need more food and so on. Anybody who thinks that shortsightedly is not thinking very hard.

We also need open space. You just have to look at the difficulties they have with places like Algonquin Park in limiting the number of people who are allowed to go on canoe trips every day on a daily basis and so on. This indicates a lack of open space. The greenbelt situation

around Toronto is not going to be enhanced by the gradual fill-in of industrial power oriented industry or plants which produce fuels for such industry.

With more industry, of course, there is bound to be more pollution. There will be more power lines. In the Port Hope area we are already having trouble with a number of people complaining about the disruption of farming activities with power lines moving across their properties.

As far as employment is concerned, I am quite sure that construction workers are able to build a Sun Life Building, as in Montreal, or a Royal Bank Building, just as easily as they can build a nuclear refinery.

To move on to the larger aspects, the reasons for these problems are generally unknown. I would like to refer to two articles which, in drawing up this outline of what I was going to say, in doing as much reading as I could to make sure I covered enough so that there would be reasonable evidence given, I will refer to them in a moment. First of all, the attitudes of industry, you can ask any businessman. The only kind of a curve he seems to be interested in is one that has a

geometric shape and goes upwards. He has never heard of a curve which comes down except in a depression. This is an unusual type of curve. It is just man-induced and usually ends in collapse. We cannot afford to have that kind of thinking. The problem is partly education. Unfortunately, over the years, our school system has not provided background information for total living. It has been perhaps oriented to business, economics, political science, engineering and so on. This is a pity because, funnily enough, we live before we earn money. We have to live after we earn money and, funnily enough too, for thousands of years nobody ever earned any money and they still lived and probably were sometimes better off than we are now.

The lack of knowledge of the basis of ecology is an unfortunate situation. I have written to the Minister of Education and I have an article here printed in the Canadian School Journal for 1977 regarding the importance of teaching a science and the need for a balanced educational program. Do we really need this refinery? Just because we can do it doesn't mean we have to. A perfect example of the white elephant of the age

is perhaps the Concorde. The States woke up several years ago and decided not to build one. Now I suppose they are sorry because they don't have the prestige to be able to say that "We got there first". They have shown they could put people on the moon and with that kind of ability it can be done, but I don't see them putting any people on the moon this year or last year or the next year. Why not? Just because it can be done, it does not have to be done.

The Eldorado refinery is one step in the long chain of events going from digging up uranium to using it for power. All the way along the line there were possibilities of highjacking, kidnapping, terrorism, safety and sabotage. We don't even have to wait for that. A few weeks ago in Quebec there were vast power failures because of the inability of a grid system to handle a load which they were not able to figure out at the time. Perhaps they have now. In New York City the same thing happened not very long ago. The same thing happened a number of years ago. Okay, chaps, let's get to work and fix it. They didn't fix it and they probably won't be able to again. The difficulty is the bigger the things we make are, the worse they

are when they collapse. The chances of two 707's or 747's colliding is absolutely ridiculous, one in a million, but it has happened. We can't afford to take that kind of chance with something that we don't know everything about. We are never going to know everything about nuclear power.

I would like now to read a couple of bits from an article by David Orr in the Sierra Club Bulletin for May, 1977 and I quote:

> "In an era when almost everything seems to be increasing exponentially, the number of potentially catastrophic occurrences appears to be no exception. A century ago a list of the most serious disasters possible would have included only one global event: collision between the earth and a large meteor. Any current list of potential disasters would include nuclear war/accidents/terrorism; worldwide epidemics; depletion of the earth's ozone shield; the death of oceans; global climate changes; the melting of the polar

icecaps; accelerated soil erosion; widespread chemical contamination; resource and energy shortages; and so on."

Most of those things are going on right now and we have examples of them all around the world. I will go on again:

"While there is room to debate specific items, the general trend suggests that we face an increasing numbe of potential disasters. Even Herman Kahn, otherwise an irrepressible optimist, concedes that there is a 'list of fifty problems we don't understand; any one of these might kill or harm us greatly'."

To go on a bit further, the whole of this article would be an ideal one for everyone to read. It is not very long and it really summarizes the problems very well. It is called "Social Risks and the Energy Option":

"It is time to face the fact that we have no good energy options left, although we do have some that are decidedly better than others.

Under the circumstances of high risk and uncertainty, the only prudent course is to adopt what game theorists describe as a 'minimax' strategy (i.e., minimizing the maximum hazard) -- to minimize the likelihood of large-scale disaster(s) by avoiding irreversible commitments of capital and reputation in risky technologies. Through some linguistic alchemy, those advocating a more prudent approach to risk have been labelled 'radicals' while those urging the expansion of risk are identified as 'conservatives'."

To continue:

"Using the energy flows of society as a leverage point, the first step of a minimax strategy is to readjust consumption to levels that can be sustained by income sources, thereby avoiding the risk of catastrophe or depletion. A minimax goal of a 'sustainable energy society' would require (1) a strong commitment

to energy conservation; (2) the physical restructuring of society to favour energy efficiency; (3) the development of new values and standards; (4) a long-term transition program to phase in renewable energy technologies."

To finish with this article:

"Too often when the public has been omitted because of presumed ignorance or alleged indifference. It is closer to the truth to argue that citizen apathy and incompetence stem from a lack of opportunity for meaningful involvement in a society grown too hierarchical, and overly dependent upon experts. Wide participation is a necessary antidote to the tendency of elites to maintain power by keeping the public dependent upon complex, esoteric, expensive, and risky technologies that demand centralization."

"The transition to a substainable-energy society could

provide stimulus for a period of unparalleled social creativity necessary to build the institutional base and attitudes for participation. It is time, in the words of one expert, for the creation of 'new kinds of institutional arrangements and novel procedures for decision-making'."

This article is quite a good one, and I would like to quote from another one now. This is by Amory Lovins. Amory Lovins, as perhaps some of you know, is a consultant physicist concentrating on energy and resource strategy. He has collaborated with several UN agencies, OECD, the International Federation of Institutes for Advanced Study, the MIT workshop on Alternative Energy Strategies and the Science Council of Canada. Again this article called "Untangling the Nuclear Debate" was given at the Habitat Conference in Vancouver last year. It is an article that everybody should be advised to read. It is debating comments by Edward Teller, Hannes Alfven, Louis Leprince-Ringuet, Sir John Hill, Henri-Paul Jammet and Marcel Dousset, who have considered whether nuclear power is safe, clean, economical or

necessary. I will read sections of this if I may:

"The first duty of a scientist addressing the public on a technical subject is to call attention to professional disagreements and uncertainties so as not to create a false impression that matters in dispute are actually resolved. Disputed matters are by definition opinions, not facts, and must be so presented. Thus, statements about the likelihood and severity of reactor accidents or sabotage, the behaviour of geological formations over tens of millions of years, the toxicity of plutonium and so forth are all opinions and can only discredit scientists who present them as facts. Differences of technical opinion must be acknowledged, then explored by reasoned analysis (which does not include refutation by emphatic dismissal). But scientific discourse cannot settle all disputes.

"Public policy decisions in democracies, even if superficially of a technical nature, should continue to be made by the common sense judgments of politically accountable generalists, after full and informed public discussion. Where such decisions are partly technical (they can never be wholly technical - that is, devoid of value judgements), experts must provide the best information that they can, and clearly state its limitations, but it is not their job or right to take the decisions themselves, nor to define the framework within which value conflicts are to be politically resolved, nor to try to exclude the public from discussion and decision, nor to claim any monopoly of wisdom or jurisdiction. It is not for them, as Leprince-Ringuet suggests, to commit 'us' to nuclear power without waiting 'for the public to be fully informed', nor as Jammet and

Dousset urge, to enforce official policy in the face of 'astounding . . . ignorance' and 'lack of logic'. Such practices would sacrifice accountability and other democratic principles in favour of government by the elite. No expert has the right to be blindly believed by anyone, just as no premise has the right to go unchallenged, as Jammet and Dousset would have us believe, simply because it is a government policy.

"When experts disagree, as they often do, you may feel unable to resolve their technical differences for yourself. But often what look like technical differences are simply differences of personal values and are, therefore, easy for non-experts to judge."

There is a lot more in this which is really something that, as I say, I would like to read the whole thing, but there is almost no time and you would be probably somewhat bored with it. There are a couple of other items I would like to mention which I think are

important.

THE CHAIRMAN: May I remind you, you have spoken for twenty minutes now. If you can do it in the next few minutes, we would appreciate it.

MR. GOERING: I am sorry. I didn't know what the time limit was. Another quote here is:

> "It is astonishing, too, to see the energy sector's most costly, complex, vulnerable, high risk, unforgiving, highly bureaucratized high technology advocated as an appropriate development tool."

Part of this is discussion of the safety of atomic power. He says, after discussing all that, and having come to no decision:

> "These arguments suggest that if nuclear power were in itself environmentally and socially admirable, it would still be a bad idea because of the sort of energy system it would lock us into. And even if -- which is not the case -- nobody perceived it to be so,

nuclear power could still not possibly do what we expect of it."

In other words, the capital costs, the incredible amount of money required to keep us going at growth rates we sort of predict and extrapolate are just unbelievable and I think most of the people in business are saying that. You just look at any of the predictions for the capital cost for energy and they are what you might call "out of sight".

This last bit here:

"Its proponents talk loosely of needing it for the next few decades because we are short of fuels. Since these supporters give no numerical data, I shall. (This is Amory Lovins.) If world conversion of commercial energy grew by only three per cent per year (about half the historic rate), and if we could commission (not just start building) one new 1000-megawatt nuclear station per day, starting now, then in 2000 we should still be getting over two thirds of our primary energy from fossil fuels, burnt

nearly half as fast again as now. Moreover, such a large nuclear system would cost tens of millions of millions of today's dollars; would encounter formidable resource, manpower, political and land-use constraints; is probably ten times as big as we could actually build in that time; would reject enough heat to warm the earth's whole freshwater run-off by two degrees Centigrade; and would make about enough plutonium for a bomb each minute. Finally, if somehow we could build reactors so quickly, it would take so much energy to build and fuel them that the nuclear programme at 2000 would probably have consumed more energy than it had produced - a transient effect, but an important one - and we would still have too much electricity but too little oil and gas."

In closing, I would just like to bring those of you

who may not have seen it -- I wasn't here, I am afraid -- to the comments of last night's "Guide". It reports here that Mr. Wladyka:

> ". . . said the town also supports the refinery."

I am a member of the Town of Port Hope and I do definitely not support the town's policy. Unless a referendum is taken, I don't see that it is possible for somebody to do that sort of thing. It goes on to state:

> ". . . ' in all the years we've been dealing with Eldorado we haven't had any problems as far as the environment is concerned.' ."

I wonder why we are spending $5 million cleaning up Port Hope?

Thank you.

THE CHAIRMAN: Thank you, Mr. Goering.

---(Applause)

Are there any questions of Mr. Goering? Reg Lang.

MR. LANG: As a result of your brief I have a few more things to add to my list of readings but I don't have a very clear

idea of the basis of your concerns. I gather you are opposed to the refinery?

MR. GOERING: Yes.

MR. LANG: Can you tell me briefly why other than your opposition to nuclear power ---

MR. GOERING: I am not just in opposition to nuclear power. I think nuclear power, for what it has done, has done a very good job. My concern is, we are locking ourselves into a system from which there is no return. People who usually come from organizations like power commissions and the Ontario Hydro is one, pooh-pooh solar power and say it is no good and so on and so forth. In Port Hope I happen to have a solar hot water heater on my house. The Port Hope Hydro has been very kind in lending me meters so I can figure out how much electricity my hot water is using. I have also borrowed from the Water Commission in Port Hope a water meter so I can tell how much hot water I am using again. With the records I have been keeping we are saving about 30 per cent at good times. This has not been good times since September, as you know, but there is absolutely nothing wrong with nuclear power. It is perfectly viable right

now. I have an article here, and perhaps you read in the paper, the Minister of Natural Resources, Mr. Frank Miller, opened the other day the first solar house in Muskoka. I have photos of that and I saw it again last weekend. It is perfectly viable.

MR. LANG: How do you recommend the building of this refinery -- to block solar energy development?

MR. GOERING: I don't follow your suggestion.

MR. LANG: I don't follow your reasoning either. You argue against nuclear power for solar energy?

MR. GOERING: Nuclear power is a form of power which is used to heat houses quite often. Nuclear power produces electricity. We could get into a long discussion of the merits of electrical heating of houses which has become a very prominent method of heating houses and which is a very inefficient method for heating houses because, as you are probably aware, it is more efficient to burn the oil in your house than it is to burn it in the power station, convert it to electricity, even though you lose no conversion in the actual house. The inefficiency is in the power

station and a nuclear power station is approximately 30 per cent efficient. Now, if you used the heat for heating housing, businesses and industry around them, this would, of course, increase the efficiency.

MR. LANG: This is the last time, I promise you, but this is not a nuclear power plant we are talking about.

MR. GOERING: Where does the fuel get used? It gets used ---

MR. LANG: How do you make the connection?

MR. GOERING: Maybe I am misunderstanding the whole problem, but it is my understanding radium is usually refined to make fuel for use in a nuclear power plant. Is that not right? I think basically this plant is for export. I haven't even touched on the export part of it. We seem to think -- we talk about being hewers of wood and drawers of water and here we go again. We cannot afford to say this sort of thing. In the paper a few days ago people were crying about the Science Council of Canada saying we should ration gasoline, people saying of the oil companies that they have an overage of gasoline. I worked for an oil refinery for nine years and surely they are able to take

gasoline and make it into something else. So, therefore, just because we have an overage, do we have to settle ---

THE CHAIRMAN: I think Peter Bird also has a question.

DR. BIRD: Mr. Goering, I think I understand the linkage you are drawing between the refinery and nuclear power. One thing I am not clear on, however, is whether you have either studied or have any particular views with respect to the Port Granby waste disposal site. There is, of course, the prospect that the proposed refinery will not go ahead, at least perhaps not on that site and maybe not at all, but what we do have on the site right now is a waste disposal facility. You, I am sure, have found out there have been some problems with it. What would you like to tell us about your views on that?

MR. GOERING: I think in my introductory remarks I mentioned that a refinery, of almost any sort, is bound to produce air and water pollution. The waste disposal has come under fire. I thought that people who had been presenting briefs recently who live in the area know a great deal more about it than I do. I would

like to have six pairs of legs and 12 pairs of arms to be able to read and visit all these places, but I can't, so I have to give sort of a not on-the-spot view. My view is I have not been able to look at the bentonite to see whether weeds grow through the level. I am quite sure bentonite is a good material in its place, but I don't think it is subject to non-motion over thousands of years. Maybe, if it is in an undisturbed area -- I really couldn't tell you. This is why I read these comments from Amory Lovins' report and we can sort of say "Gee, we will be all right unless . . ." and my point is the "unless" is something we can't do too much about. The materials going into any stream that was running into the lake would have to be dammed up and deflected or diverted, that is upsetting the environmental situation. We can't do that sort of thing. We have done it enough around the world and surely by now we are beginning to learn that the more we meddle with natural systems in the long run, the more trouble it is to get it back to normal. That is my general view on it.

DR. BIRD: Are you suggesting, then, that if you plough ground in approximately 630 acres, which Eldorado now owns in the Port Granby

area, with the exception of the existing waste disposal site, would you suggest that the rest of that should be returned to agricultural purposes?

MR. GOERING: Yes, I would.

THE CHAIRMAN: Thank you, Mr. Goering. Any questions from the Board?

MR. GRANT: I just have a problem with this witness.

THE CHAIRMAN: I am sorry, we can't hear you.

MR. GRANT: I have a problem. Is it on now?

THE CHAIRMAN: No.

MR. GRANT: Is that better? I have a problem trying to understand the answers to your direct questions. I understand quite clearly that you are opposed to nuclear energy generally and nuclear reactors in particular. I assume that your opposition to the refining of uranium is probably based on the premise that, if you cut off the supply of fuel to reactors, the reactors will go away. Taking that into account, what specifically do you have by way of objection to this refinery in Port Granby, which is the subject matter of this application, if anything?

MR. GOERING: Once again I said in my preliminary remarks about air pollution and water pollution. Just because it is in an area that is away from the Town of Port Hope, it should not mean that you can put anything into the air or the water to degrade that area.

MR. GRANT: Is it your view we should put nothing in the air at all for any purpose?

MR. GOERING: I didn't say that. In other words, we should stop breathing. It actually helps the plants that we do breathe, but I think some of the things that are effluents from any industrial plant are not good for the environment. I have a suggestion. I suggest you totally recycle everything. One of the recommendations -- I have been giving talks on this sort of thing for close to ten years now -- some of the things I recommended way back then are now actually in effect, not because I recommended them, but one of the things that might be possible would be for you to put no effluents into the lake. You recycle everything. Why couldn't that be possible? You buy a block of water, you use it to your heart's content. If you mess it up, that is your lookout. You buy a block

of air, you use it and you put it back the way you got it. The point is that we don't seem to understand, and this is what I mean about ecological knowledge or education, that if we all add a little bit, it makes a lot. You get the various oil companies or the energy people saying "If we all save a little we will save a lot", and you could reverse that very easily. Therefore, have you not heard of the International Joint Commission on the Great Lakes, the report just recently, on the amount of effluents going into the lakes?

MR. GRANT: We did. In fact they said very good things about the water right off the site.

MR. GOERING: I have seen ---

THE CHAIRMAN: We are going into debate here which could last an awful long time and we have six more speakers. I hate to cut you off, Mr. Goering, but I think I have to. There are some other questions.

MR. SHIKAZE: Mr. Goering, in one of your quotes you make reference to comments as to decision-making. In listening to testimony for the past two weeks I get the feeling that to some extent this panel is going to be faced with some

pretty hard comments as to decision-making. Have you any thoughts or comments with respect to helping us in what you think comments as to decision-making should be?

MR. GOERING: That is a tall question, but I would say from the number of articles I have read on this subject, they are not specialist articles. I don't see how you could be a specialist and a generalist at the same time at this point, but I would say that some of the things that Amory Lovins has written make very good sense. This article - I am sorry - it could be borrowed, but I would be glad if you had a machine that would make a copy of it. I don't think you can get these copies any more but if you would like to do that, there are other articles by the same sort of person, Herman Kahn, who are indicating that the quality of energy is completely haywire and only now are we beginning to understand there is no way you should use electricity for mundane things like heating houses.

People who say an electric shaver requires - I don't use an electric razor which uses a minimal amount of electricity if they should be allowed. What the heck did you make it

with in the first place? No energy required, of course, stainless steel, floating plates and all this sort of stuff ---

THE CHAIRMAN: Mr. Goering, I think you should restrain yourself. I think perhaps Mr. Shikaze got his reply. If there are no further questions, this may be ---

PEGGY CLARKE: Mr. Goering, do you mean to imply by your statements you don't accept any government standards for radiation contamination?

MR. GOERING: The government standards are maximums which means you can get anything you want into the air up to that maximum, and I discussed this with these people in the government before - this is the way it works: If air is pure, you know, if you take in Muskoka or over the Arctic, providing the nuclear dust from the Chinese bombs ---

THE CHAIRMAN: Could you just answer yes or no to Miss Clark's question?

PEGGY CLARK: Do you doubt that the government standards for radiation are realistic?

MR. GOERING: I am not an expert so I cannot answer that.

THE CHAIRMAN: I think it would be appropriate to have a very short break now and possibly another one later. Five minutes please. There is coffee available in the room behind us.

--- Recess.

THE CHAIRMAN: Could we reconvene, please, ladies and gentlemen? Could we reconvene, please, ladies and gentlemen? I hope the sound can be heard outside.

Our next speaker is Professor Horst Wittmann from Port Hope. He is coming to the table - is he coming?

I might also point out that in addition to the people I mentioned, we also have the Oshawa and District Building Trades Council, so the remaining speakers are Professor Wittmann, Town of Newcastle, Mr. Bruce Laird, Professor Paehlke and Oshawa and District Building Trades Council.

PROFESSOR HORST WITTMANN: Mr. Chairman, I have taken upon me to raise a number of subsequent questions and I apologize for the fact our manuscript is not in your hands. I just finished typing it a few minutes before I got here.

THE CHAIRMAN: Can you pull the

microphone closer?

PROFESSOR WITTMANN: I apologize the manuscript is not in your hands. I just finished typing it a few minutes before I got here. I intended it to be in your hands.

I represent no lobby, no pressure group, no political party, I do not speak to you as an expert on the dangers of radiation or environmental contamination, while I realize that some of the members of this panel are no experts in this field either. I do not speak for the nuclear industry, but my position is not a priori anti nuclear - I do in fact consider nuclear power to be a significant future source of energy acceptable, however, only after certain questions have been answered and certain fundamental conditions have been met.

I do speak to you as a private citizen, as the father of a daughter who attended St. Mary's School on Pine Street in Port Hope which had to be closed because of dangerous levels of radiation - a school, incidentally, whose teachers - who in some instances had taught there for more than a decade - and whose pupils were never collectively examined nor studied for possible effects of exposure

to radiation, a school which in the opinion of the supervising engineer of the company doing the cleanup, with whom I spoke, should have been razed, if all radiation was to be eliminated, but which was not torn down for what he said were political reasons, namely the fear of establishing standards which could serve as a precedent, triggering similar demands by buildings similarly affected.

Finally, I speak to you as a citizen of Port Hope, a town that was catapulted into international prominence through the grave problems caused by her major industry, a town that has been misled and let down before, a town that for too long relied on the wisdom and sense of responsibility of her local experts, a town which now faces a similar and bigger plant next door.

From all this derives a sense of vigilance and due alarm at the magnitude of the problem before us. Yet it is my determination to see to it and to contribute to the fact that the debate of these matters is carried out in the spirit of co-operation rather than confrontation, so that the voices of reason and common sense prevail and that we address the problem not simply from the viewpoint of short-term gain or purely local perspective

or vested interest - like letting the unemployed construction worker decide whether the erection of a building is necessary, practical or morally defensible.

To state it plainly, the past safety record of the company that is proposing to run this refinery is dismal, if not downright irresponsible, both here in Port Hope and at the Port Granby Dump site. There exists a genuine crisis of confidence. The exposure of past negligence of Eldorado Nuclear was brought about by concerned outsiders and correction of existing errors and violations were effected only after a public outcry and considerable pressure. And do we really know anything about the nature of the damage that has already been done?

There is at this point no basis for trust. The events that have led to these hearings have intensified our predicament. One Million Dollars of the Canadian taxpayers' money have been spent to justify Eldorado's plans, while not one penny has been made available to disinterested, neutral investigators, who have more than short-term gain in mind It is this dilemma which I would like you to understand, this makes it impossible to arrive at a balanced judgment at this

juncture of the deliberations.

The crucial decisions must not be permitted to be unduly influenced by politically or materially motivated forces. At the same time I have to beseech you to be cautious of those experts who have ulterior motives, or of the narrow specialists who do not comprehend the total context in which this issue is imbedded. Of those, to use an analogy, that are not unlike the military experts who would have the main say in decisions about the necessity of war. This panel will ultimately have to rely most heavily on the advice of the objective generalists, without whose regulating function our system of decision-making would fail.

I am sure that every one in this room is interested that the towns that will be affected by this refinery will flourish. Why if that is true, is it necessary to build the refinery in the first place? I have spent hours reading the Environmental Impact Assessment and the relevant Appendices and I fail to detect any compelling reason why this project should be carried out. In fact, I find many reasons why it should not. The document admits that the economic impact on the surrounding communities as outlined in Chapter 6

would be minimal, whereas it implies that the environmental impact as dealt with in Chapters 4 and 5 is potentially monumental.

Furthermore, I have come to the conclusion that the reasons for the choice of the Port Granby site are not that it is geologically and demographically the safest location in Canada, but because it is the most conveniently located site in its proximity to the presently existing facility, that it was chosen not because of its special geological conditions but in spite of them.

In addition I find the information dealing with waste management and the impact of pollution on ground water vague and ambiguous suggesting unacceptable dangers.

Why take the risk of adding to the destruction of this magnificant lake on our doorsteps, which is already one of the most toxic bodies of fresh water in the world? What are the advantages? Why create the real danger that an addition to the many already existing nuclear facilities on this short stretch of Lake Ontario would serve as a deterrent to badly needed economic growth? It is indeed easy to imagine why people would shy away in the future from such a

pool of problems and real and potential dangers. The Real Estate market, incidentally, still has not recovered from the after effects of the last shock. Why take this risk?

What will we really benefit? I fail to see the answer. I do not find one piece of evidence in the entire Environmental Impact Assessment that points up a real need for the people of this area or for this nation to build this plant, no real reason other than the motive of misguided or short-sighted profit. The finished product, which is not quite finished yet, but the product Uranium Hexafluoride is intended solely for export to fuel foreign nuclear reactors. We once again, as we have done for too long with our oil, whose export we are now stopping, are selling out our non-renewable raw materials without long-lasting benefit to us. Will there be enough for us when we really need it? Can we responsibly support such an undertaking?

We are indeed perpetuating the old pattern of colonial exploitation, of which we have long been the victim, in the name of short-term financial gain, but ultimately at a price which in my mind is too high, namely, that of the risk of

polluting our environment and of short-changing and endangering our people. Are we willing to take that risk?

Furthermore, our own Candu Reactors are presently under severe attack. The 600 page report called Half Life - Nuclear Power and Future Society, commissioned by the Ontario Coalition for Nuclear Responsibility and to be presented to the Porter Commission on October 19 levels heavy criticism at the safety measures and safety information of the Candu system and it especially focuses on the constantly changing data on nuclear safety and nuclear danger pointing out that the basic study - Rasmussen Study - on nuclear risk is believed to have underestimated the risk of nuclear power many thousand times over.

Do we dare to go ahead with this project before the Porter Commission findings and recommendations have been made public?

Are we willing to take that risk? And of course, there lingers another moral question of equal magnitude. Are we willing to contribute to the distribution of nuclear material that can be used by unstable foreign governments for the manufacture of nuclear bombs? Do we dare, as a

nation, to take upon us the curse of having increased the likelihood of a nuclear holocaust for reasons of short-term financial gain?

These are some of the questions that you members of the panel have the **enormous** responsibility of answering for all of us. Do not let us down

I hope you will agree that at this stage of the decision-making process three things are imperative:

(1) More time to carefully study the issues.

(2) More money to enable neutral objective scientists to carry out research on the proposed alternatives, and

(3) More stringent standards to police existing facilities and to assure the safe harnessing of the indispensable resource of nuclear power.

--- Applause.

THE CHAIRMAN: Thank you, Professor Wittmann. Mr. Shikaze.

MR. SHIKAZE: Just to follow up on your very last point, Professor Wittmann, with reference to more stringent standards. You feel

the standards are not strict enough or there is inadequate enforcement of existing standards?

PROFESSOR WITTMANN: There is probably a combination of both. I would like to see the carrying out of both of these steps that you just suggested. The second point that you mentioned could have been one that I might have included. I would certainly support that as well.

THE CHAIRMAN: Any other questions from the panel? Any questions from Eldorado?

MR. GRANT: What are you professor of?

PROFESSOR WITTMANN: I am teaching German.

MR. GRANT: You said Port Hope was misled and let down. That is your own personal opinion and ---

PROFESSOR WITTMANN: I didn't understand the last part of the question.

MR. GRANT: You said the town of Port Hope was misled and let down by Eldorado. Is that your personal view?

PROFESSOR WITTMANN: That is my personal view and I base that on the history of the village, the contamination of sites including

the school that my daughter attended, including the Port Granby site.

THE CHAIRMAN: Any other questions? Thank you, Professor Wittmann.

The next speaker is the Town of Newcastle. John Willms and Harry Poch who are solicitors acting for the Town of Newcastle.

MR. GRANT: Before Mr. Willms starts, could I ask him to state whether he is now speaking on behalf of the Council? We are interested in knowing what the Town's position is.

MR. WILLMS: Mr. Chairman, I intend to get into that in the course of my presentation.

Mr. Chairman, my name is John Willms. With me is Mr. Harry Poch. We are solicitors and we are acting for the Town of Newcastle. We have been retained specifically by resolution of the Council of the Town to represent the Corporation of the Town of Newcastle at these hearings and generally regarding the proposal of Eldorado Nuclear Ltd. to build a refinery and establish a waste disposal site at the Port Granby site.

I would like to start off the

presentation with a very brief description for the assistance of the panel in case nobody has done so to this point.

The municipal structure and jurisdiction in the area. The Town of Newcastle was created in 1974 and should not be confused with the Village of Newcastle in which we are located. The Town of Newcastle was created at the time of the creation of the Regional Municipality of Durham. It is composed of the original Township of Clark in which this site is located, the Township of Darlington, Town of Bowmanville and the Village of Newcastle. The Town of Newcastle is geographically the biggest municipality within the Region of Durham. Its population is approximately 30,000 of which 16,000 are located on farms, agricultural. The remaining 14,000 located in residential communities.

The Municipal Government is split between the Region and the area municipalities. Generally speaking, responsibilities for regional planning, the provision of certain hard services and in particular domestic waters and domestic sewage treatment, provision of solid waste disposal sites are within the jurisdiction of the regional municipality. Certain other social services such

as general welfare assistance and day care centres are also within the jurisdiction of the regional municipality.

Local planning, storm water disposal, library services, recreational services, are all within the jurisdiction of the area municipalities.

Mr. Chairman, Newcastle, the Town Council of Newcastle has instructed me with the concerns and communicate its position to your panel, as it is now formulated. The position is not a simple one. It is not a decisive one. The Council finds itself in the position of having to have considerable further input before it will be able to make any decisions regarding the acceptability of this project to the democratically-elected representatives of the people of the Town of Newcastle.

In particular the Council will be very interested in the outcome of this environmental assessment and quite concerned about the answers and the resolutions of a fair number of issues, most of which I hope to cover in my presentation today.

I have been particularly instructed by the Council to indicate to your panel that the primary concerns of the Town are threefold.

The first is the protection of the local residents from the disruption of a stable rural and hamlet residential community.

The second is the protection of the local residents from any risk whatsoever of radioactive contamination, poisoning or any other danger, long term or short term, to their health and safety from this project.

The third major concern of the Town is the general protection of the environment from pollution in any degree that may be serious and in any form.

The Council of the Town is aware from a short-term point of view that the project may well have and certainly can be argued to have certain economic benefits to the municipality. This is particularly true if the grants in lieu are paid as has been proposed by Eldorado Nuclear both at these hearings and in the Environmenal Impact Statement.

I am instructed to emphasize to your panel that from the point of view of this Council the economic benefits of this project are not a significant selling point. This project should only even be considered for acceptance if those foregoing

three concerns which I have enumerated are completely satisfied.

Mr. Chairman, the remainder of my presentation is broken down into a number of sub-headings and I will give you different things as I go.

First is Analysis of Need. The Environmental Impact Statement does not deal with the question of the need for this project. It only indeed documents the desirability of the project in the most general terms. We submit that a full cost benefit analysis should be undertaken and in particular we are concerned that environmental safety considerations may be taking second place to considerations of profit maximization.

It was alleged early in this hearing that Eldorado Nuclear's decisions are sometimes seen to be made on that basis and on the basis of relative cost rather than what is "best". Eldorado Nuclear at the time countered with the remark that Eldorado always opts for the "best" solutions and the fact that the "best" solutions have generally been the cheapest is only a fortuitous coincidence. It would appear possible that another such "fortuitous coincidence" may have occurred the finding that

the Port Granby site is the best possible site **overall** for this project. We would ask the Eldorado Nuclear to inform this Panel of the significance in its site selection process of the economics of this particular site as opposed to other sites.

This has been done so in a point raised in that scheme in both of the Appendices, but not to any level of detail that we feel is acceptable. We would further ask Eldorado Nuclear to inform this Panel when the land purchases were made at this site and, supplementary to that, whether any land was ever purchased or options were ever placed on any property at any of the other sites studied.

The next heading - The Existing Waste Disposal Site. Eldorado Nuclear states that the future management of the existing waste disposal site could best be assured "through the presence of the company on the site in an active operational capacity."

Elsewhere in the Brief it is proposed that "If the project proceeds at this site, the waste from the existing dump will be relocated."

The Town of Newcastle would prefer

that this question be separated entirely from the acceptance of Eldorado's project proposal and rejects even the inference that the existing problems will not be remedied unless this proposal is accepted. The existing waste must be removed from the current location regardless of the disposition of this proposal.

The next heading - Land Use, Planning Considerations. Virtually no consideration has been given in the Environmental Impact Statement to the implications for the town's and the region's overall land use plan. Eldorado Nuclear has not yet applied for a re-zoning of the site to a designation that would permit the project. The site is currently zoned agricultural. Prior to or simultaneous at least with that re-zoning application, Eldorado Nuclear must apply for an amendment to the Regional Official Plan which designates the site as a special study area.

These procedures will enable the appropriate bodies to discuss and evaluate the significant land use planning implications of this project properly and effectively. Some of the issues which must be dealt with are:

(1) The preservation of the character of the

area. The impact of this project on the rural and pastoral, some might even say idyllic quality of the area, will be considerable and hence the impact on the life-style of local residents.

(2) The project sterilizes or polarizes over one square mile of land in the municipality and potentially a much larger area depending on in a sense the psychological effects of the project on decisions of other land-owners or developers. The project has proposed:

(3) For a part of the town not now planned to develop at all, let alone for any major industry. Industry is planned for other areas more to the west of the town. The development of this site will therefore contradict the land use plans developed in the town and by the regional municipality and defeat an important planning principle of concentrating all industrial development in one or more specific locations.

(4) Certain portions of the lakeshore have been set aside for industrial development or have already been developed. This project would further remove lakeshore property from other uses appropriate to lakeshore property in a natural state.

(5) The project is in violation of regional and provincial policies regarding the preservation of agricultural land.

(6) No study has been made of the effect that this project may have on other growth patterns in the town and there are a lot of unresolved questions. Would this project create pressures for further nuclear industrial growth in the east part of Newcastle? Will the spectre of radioactive pollution deter other industries from locating in the town? What effect - I should say similar questions may be asked regarding residential development in the Town of Newcastle and as a corollary what effect will this project have on land prices in the town?

(7) Wage rates to be paid at this project, as estimated in the Environmental Impact Statement, will be considerably higher than the Town of Newcastle average. What impact will this competition for labour have on existing local business, local industry and farm labour markets? Will this factor reduce the attractiveness of the area for other industry?

(8) What municipal services will be required for this project? The Environmental Impact Statement gives us no indication of require-

ments for domestic water supplies, sewage disposal facilities or solid waste disposal sites.

(9) No transportation planning for this project has been done. Planning must be done separately for two phases. First of all, for the transportation of construction materials, machinery and workers to and from the site and, secondly, for the transportation of raw materials, product, waste and commuter traffic during the operation of the plant.

It is surprising that Eldorado Nuclear would even consider routing the traffic to the site from the west along the Lakeshore Road through the Hamlet of Port Granby. The road access to the site is clearly insufficient at the present time and no work can be allowed to proceed on the project, if the project is permitted at all, until this situation is remedied.

My next heading is - Waste Disposal Site. One Brief presented to your Panel referred to the "glad bag" approach. Unfortunately, due to past experiences in the area, the credibility of Eldorado Nuclear's submissions regarding the safety of the proposed waste disposal site is not as acceptable as it might be. We have another

prediction in what appears to have been a series of predictions of foolproof methods for waste disposal and yet, to a layman's eye at least, the proposal looks flimsy.

We would ask that information be supplied in the following areas: Firstly, I was quite shocked on reading the Environmental Impact Statement to see how other sites compared to this site from the waste disposal point of view, to find that no analysis of the other sites was ever undertaken in terms of their suitability for waste disposal.

We would ask evaluations of other sites for waste disposal be prepared so that this site can be seen as an alternative.

Again, no presentation of alternative methods of dealing with the waste has been given in the Environmental Impact Statement. We believe that Eldorado Nuclear should propose some alternative methods with their respective benefits and dis-benefits.

Thirdly, we would ask that Eldorado be required to consider a specific alternative and to present to your Panel the benefits and dis-benefits and that is of locating their refinery at this site

and locating the waste disposal operation at other locations.

THE CHAIRMAN: Mr. Willms, I am not intending to cut you off yet but you have spoken for 22 minutes. If you are able to - it would be helpful if we could receive your Brief in writing and present it to Eldorado and the public later.

MR. WILLMS: Mr. Chairman, I would like to finish. I don't intend to take that much longer. It is the first opportunity that the Council of the Town has had to make its concerns known to your Panel and these are all concerns that the Council in a sense weighs equally. I would not want to cut it short, I don't think I will be much longer. I must apologize to you for not having a written Brief for your perusal. I will be getting my presentation typed tomorrow and I will be forwarding it to you immediately.

THE CHAIRMAN: Thank you. Could I perhaps ask you to try to do it in the next five or six minutes?

MR. WILLMS: I think I can probably finish in close to that time. Thank you, Mr. Chairman.

My next heading is - Compliance with

provincial and municipal regulations. Eldorado Nuclear has stated it will, if at all possible, comply with provincial laws and standards and municipal by-laws and yet it has not yet applied for a re-zoning or an official plan amendment or applied for a permit to operate a waste disposal site under the Environmental Protection Act, applied for permits for water intakes and discharges under the Ontario Water Resources Act; or applied to the Ministry of the Environment for a designation and review of the project under the Environmental Assessment Act.

Mr. Chairman, I would like Eldorado Nuclear to advise this Panel and the municipality what provincial and municipal by-laws and statutes it feels they are not obliged to comply with and will not be able to comply with.

In addition, the Atomic Energy Control Board yesterday stated that their policy is to comply and ensure compliance as much as possible with provincial standards and municipal regulations. Yet, Mr. Chairman, the municipality was not even notified prior to the last renewal of the licence for the waste disposal site in Port Granby.

My next heading is - Safety and

there are a few specific concerns of safety that I would like to raise.

Firstly, the Environmental Impact Statement devotes only four pages to the topic of process upsets. The Environmental Impact Statement also states that during the final design process consideration will be given to the inevitable process upsets, overflows, spills, et cetera that will be occurring, particularly during the working-in phase of the plant. The consequences of escape from the plant of some of the substances that they are dealing with are so serious that we would request that that phase of the design be done and submitted as part of the environmental impact assessment.

The second safety consideration that has not been dealt with in the Environmental Impact Statement is that of transportation. What happens in the case of an automobile or railway accident involving any one of the many substances that are going to be transported to and from this site, a lot of which are fairly dangerous? There should be an analysis of the probability of such accidents occurring There should be an analysis of what may happen if such an accident will occur and I think we should note the worst case and we

should be advised what plans have been made to deal with various types of accidents that can be anticipated to occur over the lifetime of this project.

Thirdly, we have had no information in the Environmental Impact Statement as to what security measures will be taken on this site.

Fourthly, we have no indication or, rather, I should say little indication of the planning for monitoring of the environmental impacts of the project as the project gets under way. We feel that Eldorado should supply us with information of exactly where monitoring stations will be set up in far more detail than they have, what substances will be monitored for, and what frequency, why the substances that are not being monitored are not being monitored and the consideration of the involvement of other independent agencies on a continuing basis in the monitoring programs.

My next heading - General Comments Regarding the Environmental Impact Statement Documents.

No. 1. the site selection process is sketchy and incomplete.

No. 2. We feel that Eldorado Nuclear

should document that the environmental data, the data used in preparing the environmental inventory is the most up-to-date or, in the alternative, provide the reasons why the most up-to-date information is not being used.

No. 3. What regard, if any, has been given regarding existing Ministry of the Environment, Ministry of Agriculture, Federal Department of the Environment or other studies regarding other operations or regarding the environmental data base for this area in the preparation of this Environmental Impact Statement?

My last heading, Mr. Chairman and members of the Panel, is - What Does the Future Hold? We think that it is essential to know whether Eldorado Nuclear have any plans or even conceptions or should I say visions that this site may be used for any other project in the future? Is there any possibility that they may want to expand their waste disposal operations beyond what is proposed here? Is there any possibility that they may want to expand the refinery beyond what is proposed here? Is there any possibility that they may want to introduce other processes on the site?

For example, will we be considering

ten years from now a proposal from Eldorado Nuclear to establish a spent fuel reprocessing operation on this property?

Mr. Chairman and members of the Panel, it is important that the town be reassured that this is not the thin edge of the wedge on this property. Will Eldorado Nuclear undertake at this time that no expansion of this project and no other projects will be proposed for or undertaken on this site?

Thank you for your consideration.

--- Applause.

THE CHAIRMAN: Thank you.

MR. WILLMS: Mr. Chairman, one point I didn't make. We have a lot of more detailed and rather picky questions about the Environmental Impact Statement. I think for the time available here and the process, if we might be allowed to submit that material in writing to your Panel and to Eldorado Nuclear? We would appreciate that opportunity.

THE CHAIRMAN: I would hope you would do it as has been done by the other agencies, such as the Ontario and Federal Governments. I think Eldorado are attempting to collate these and

get back with answers on them.

MR. GRANT: If we get the questions in time.

THE CHAIRMAN: Any questions? Peter Bird?

DR. BIRD: Mr. Chairman, Mr. Willms has done a very comprehensive analysis. It seems to me there is a wide variety of concerns which have been mentioned throughout the last two weeks and we may save some time ourselves by having this compilation together.

One of the things I am not entirely clear on is whether in fact there may be an alternate industrial site within the township - I am sorry - the Town Line - I am not quite sure of the structure there. You imply that the proposal here is directed to an area that was not identified for industrial development and that there are other areas in fact?

MR. WILLMS: The answer to both questions is yes.

DR. BIRD: Would you feel that another area scheduled or planned for industrial development might in fact be a suitable area for the proposed refinery?

MR. WILLMS: Well, assuming that --

assuming that the site would be suitable for all the various environmental limitations, yes, I think there would be other areas of our municipality that would be better for this development than the site that is proposed. Yes, from a land-use planning point of view.

DR. BIRD: From a land-use planning point of view there would be an alternate site that is at least worth consideration in this area?

MR. WILLMS: Yes. I think that virtually all the land, these planning considerations which I raised under that heading, would by and large be satisfied except for one major one and that is that large area that is sterilized around the plant.

DR. BIRD: Because of the waste disposal site that is there?

MR. WILLMS: Because of the waste disposal site and the exclusions at it. They are talking about over a square mile. The property they own and I think the actual circle takes in quite a bit more than a square mile, so that is a problem that I foresee in terms of locating in an area that is already designated for other industrial growth in the regional official plan.

DR. BIRD: And, of course, it would have to be taken into consideration. That is one of the aspects I wanted to focus on, whether in your mind there is an area large enough to permit the proper zoning which this particular proposed refinery might be located, other factors being thought to be acceptable?

MR. WILLMS: I think I could say half facetiously that maybe Eldorado Nuclear and Ontario Hydro could share their site. I don't know if that is possible or not.

DR. BIRD: Thank you very much.

THE CHAIRMAN: Reg Lang?

MR. LANG: You refer to impact on the area and I wondered what area you meant.

MR. WILLMS: I think I was talking about the immediate area. In other words, that land area which will feel, which will perceive the impacts of the noise, visual, any disruptive impacts from this operation.

MR. LANG: How far does that area extend, let's say, from the east of the site?

MR. WILLMS: It depends to a large degree on the traffic planning that is done, transportation planning that is done. Assuming the

trucks come in from the east, then certainly I think I would say at least as far as the town boundary, the character of the area is likely to be affected. If the trucks come in from Hope Township, everybody on the truck route is going to be disrupted up to the 401 or Highway 2, wherever it is the trucks come from. Conversely, if the trucks come in from the west to Port Granby.

MR. LANG: Let me tell you what I am trying to get at. Part of that area now is extending out to the east to include the subdivision there, which at the moment is two houses. That is no longer rural and, if it is rural, I guess it is simply not agricultural. I wondered how - is that inside the confines of the town or is it in the next municipality?

MR. WILLMS: I don't know.

MR. GRANT: It is in the next municipality. The easterly boundary of our property is contiguous with the boundary of the town.

MR. LANG: We are trying to compare here the future - I am trying to compare in my mind the future environment in that area as it will occur with or without this refinery. Certainly it would be important to me to know what feelings

your Council would have to maintaining the area as it is now there if the refinery did not proceed. What is your policy, for example, on severances?

MR. WILLMS: Quite restricted.

MR. LANG: Have you granted any in that area at all in the last five years or so?

MR. WILLMS: I don't know. May I say that these questions you are asking are questions that we have not answered and that is why we are saying that a proper zoning amendment and official planning plan process should be undergone so the planners can sort of sink their teeth into all these issues. So they can try and study such factors as how large an area would be affected.

MR. LANG: Amendment to your official plan?

MR. WILLMS: It would be to the regional municipality of Durham's official plan. There is no official plan for this area. There are some official plans in the Town of Newcastle for other municipalities which were brought into the town. The official plan that was prepared for the Township of Clark was adopted by Council, I believe, in 1973 or 1972 and, due to the impending regionalization, was never processed further and

never forwarded to the Minister of Housing for approval, so there is no official plan actually governing the area.

The Regional official plan will, we anticipate, be approved fairly shortly. Some people now say before the New Year. It is likely it will be approved before the New Year.

MR. LANG: We went through that before earlier on. What would be, in your mind, the procedure involved in these special studies? As I understand it now, the Regional municipalities plan goes through, the copies I have seen, it is a special study area and if Eldorado applied for an amendment to the special study area, what would be involved? Who did you want to do the special study? Would you want to see that before you went any further?

MR. WILLMS: What I think we would request is Eldorado to do the study. It implies a consideration of other issues, a study of all those land uses and planning issues that I have enumerated in our Brief in answering those questions. I just raised a list of questions which I think have to be answered before official plan amendments or re-zonings can be dealt with.

MR. LANG: The applicant would have to do the study?

MR. WILLMS: Generally speaking in the first instance it is normal for a developer who is making a major development proposal to document his development proposal and in the sense of documenting and raising himself and answering all the land use-planning issues in the first instance. At that stage it would then be up to the Regional and Municipal planners to review that study in conjunction with the developer, prepare its own response to the developer's application in light of this study and perhaps request further studies or what-have-you, then circulate the proposals to a fair number of agencies which have involvement at one dimension or another in evaluating land use development proposals.

Once comments of other agencies are received, a final planning report would be done, recommendations would be prepared by the Council of the Town to the Regional Municipality. The Regional Municipality's planning and development staff would in their turn prepare their final planning report to their committee which would be sent on to their Council and a decision would be

made at Regional Council.

MR. LANG: Thank you.

MR. GRANT: Just before we leave this point, you said that this would be the responsibility of the developer. You realize, of course, Eldorado doesn't own anything like all the land in the special study area 12. How would that be the developer's responsibility in the area of the special study?

MR. WILLMS: It is not in the least unusual to ask a developer preparing a major development proposal to go right beyond the bounds of his own land in preparing a comprehensive development plan because very often a developer cannot be considered in isolation from the implications on the surrounding area. I suppose some of the simplest examples are subdivision plans. A subdivision developer comes in with a proposal for 500 units on a plan of subdivision which covers half of a lot, half of a township lot and you might ask him to extend the road since all the roads would ultimately link up with other hypothetical subdivisions surrounding that subdivision and how that subdivision would integrate into the overall land use planning concept, say, at least for the

boundaries of that township.

MR. GRANT: But you wouldn't expect them to put forward proposals with respect to the way in which somebody else's land would be used? Thatis not what you are suggesting, is it? Road connections ---

MR. WILLMS: Depends on the situation. It may well be, yes, that the particular development proposal will have significant implications on the surrounding land uses and therefore can be considered as a proposal for the surrounding land uses as well.

THE CHAIRMAN: I have one question. Is Darlington in your region?

MR. WILLMS: It is between the Regional Municipality of Durham and the Town of Newcastle.

THE CHAIRMAN: Did they comply with the outline you outlined earlier?

MR. WILLMS: As to whether they complied, they will be complying with zoning requirements. They have already - I believe the region has already requested the Minister of Housing to modify the official plan to allow the project to proceed. Once that is done, I understand

they will be applying for re-zoning of that site.

MR. LANG: Timing, wouldn't they have put their plans forward prior to or at least in the preparation of the plan itself? Wouldn't the Darlington plan be formulated with your planners and bring it to the Regional planners?

MR. WILLMS: The Regional planners were aware of Hydro's proposal for Darlington and designated that area a special study area as well.

THE CHAIRMAN: Thank you.

Ellan Derow.

DR. DEROW: I have a question too about timing. You seem to imply and perhaps at this particular time the petition for resumption should have been applied for?

MR. WILLMS: No, I didn't mean to imply that.

DR. DEROW: You didn't?

MR. WILLMS: I think it is important that it be done soon.

DR. DEROW: Soon. If you look at the Impact Statement as a planning document, do you feel that many of the deficiencies should be remedied before it goes ahead? In other words, what I am saying is at this particular time would

you consider such a planning document to be deficient for example as to the traffic?

MR. WILLMS: Yes.

DR. DEROW: So that there ---

MR. WILLMS: There is none.

DR. DEROW: Very, very little. In terms of if we see this document as a planning document and not just before our Panel, in terms of your needs this is the way we should evaluate your comments or some of your comments?

MR. WILLMS: I see what you are getting at. In other words, you are saying should the kind of information I am asking for be contained in a revision of this document or should it be contained in a totally separate proposal to the municipality?

DR. DEROW: Yes. It is a bit confusing.

MR. WILLMS: There is tremendous overlap, I think. As I understand this Panel you are very interested in a lot of the questions the municipalities addressed. You are going beyond the very technical scientific analysis?

DR. DEROW: Exactly. We have all these levels of government interested in impact

assessment and we are interested to hear your opinion about this and where the plan would be processed because Eldorado's planning process - these things should be considered or should have been considered in traffic. I am very disturbed about that too.

MR. WILLMS: I could go on quite a while on some of my views about Environmental Impact Assessment. You know, this Environmental Impact Assessment process unfortunately does not really take into account alternatives like the environmental impact assessment process which I find very difficult to orient myself within this process.

DR. DEROW: I am concerned about special study area No. 12 and the fact there is no official plan at this particular time. It poses difficulty with this in terms of timing, you know?

MR. WILLMS: Yes. Perhaps - it seems to me it is just a question of producing a document and all you are asking is what label do you put on the document? Why not put two labels on the document, one ---

DR. DEROW: I get you. I have a further question on monitoring. I suppose when you

first said there is little indication of monitoring impacts and you had given us a full description of the kind of monitored materials you would like to see, I was wondering if you included monitoring in the social impact or economic, impact. Maybe monitoring escaped. Then you list substances and I wondered if you could clarify what exactly the municpality would like to see monitored.

MR. WILLMS: I was talking specifically about technical scientific type of monitoring of water in the lake off the site, monitoring of the discharges, monitoring of ground-water infiltration, monitoring of air, radiation, you know, all these aspects. As far as monitoring of social and economic impact, we have not really dealt with social and economic impacts in our Brief, other than in the land use planning sense and we are not as concerned about some of those kinds of impacts on housing, et cetera, impacts that are documented in the Environmental Impact Statement as we are about in this case ---

DR. DEROW: I thought you asked for complete economic input/output analysis. You didn't ask for a complete economic analysis?

MR. WILLMS: Cost benefit analysis

of the project, yes. I don't know that - you know, I am thinking of a cost benefit analysis of the level of what is this thing all about? It is supposed to make Eldorado Nuclear a profit and why, what is the benefit of Eldorado Nuclear making a profit ---

DR. DEROW: These things must be considered, social implications.

MR. WILLMS: I suppose that is a matter of opinion. I really wasn't, I guess, in my cost benefit analysis - what I was really trying to say was what is the benefit of this project to the country? It is difficult. Okay. I guess I was not very specific on that. It is fair of you to try and pin me down on that, and I should try and be a little more precise in my thinking on that.

I was not really concerned with the benefit of the project to the local area as such, in terms of employment, tax revenue and what-have-you. What I am concerned about is why this project at all? What is the benefit of this project to our country and at a level - I am basically saying there are certain Federal policies with respect to exporting our resource materials and

we have problems with our balance of payments and the dollar is slipping on the European market and, you know, at that level it seems to me it is at that level that this project is proposed to be of benefit.

I don't think Eldorado Nuclear is building it here to help the Town of Newcastle or the Federal Government is putting it here to help the Town of Newcastle. If they were building this project with a view to immediate local economic concerns, I don't think they would be putting it here. I think they probably would be listening more to some of the submissions being made by certain other areas of the country who would perhaps feel that they need the project more for economic development.

MR. SHIKAZE: Mr. Willms, in your earlier remarks you made some reference to the Town's position and that no decision had been reached at this point in time.

I guess I would want a little bit of clarification as to what is going to happen now. When is the Town going to make its decision, after this Panel makes its decision, or is it going to go out an seek a referendum of people in that

1 particular area or what? Are you tying in with
2 our process or are you not tying in?
3 MR. WILLMS: We are tying in with
4 your process to the extent that the results of
5 the deliberations of your Panel, I imagine, would
6 weigh significantly in the minds of Council. The
7 ultimate decision that Council has the jurisdiction
8 to make is as to whether or not to recommend to
9 the Regional Municipality that the official plan be
10 amended and whether or not to augment its own
11 zoning by-law to permit this project to proceed.
12 That will be the point at which the decision is
13 made and I would anticipate that it is unlikely
14 that the Council will come up with any general
15 statement of position until all or as much as
16 possible of the facts are in. I would say that it
17 is unlikely that the Town would make that political
18 decision until it actually has put the matter to a
19 vote on the matter that is specifically within the
20 Town's jurisdiction.
21 MR. CHENG: I have two questions.
22 The first one is, you mentioned about industrial the
23 area to the west. What class of agricultural land
24 is it on?
25 MR. WILLMS: I don't know. That

is an answer that we could certainly - unfortunately I have not brought either the Regional official plan with me or the Township of Darlington official plan, or the soils mapping. I am under the impression I perhaps shouldn't even be talking, but I am under the impression that the land southwest of the Municipality is not as good agricultural land as the land in the east portion of the Municipality.

MR. CHENG: The other question is, that you mentioned the economics. I am not sure whether you are talking about local economics or the international level of economics. Economics is not a strong selling point as far as this project is concerned.

MR. WILLMS: You said it is or it is not?

MR. CHENG: It is not.

MR. WILLMS: The local economic benefit to this is not a strong selling point to Council, no.

MR. CHENG: Can you amplify a little bit more on that?

MR. WILLMS: Council is far more concerned about the three particular issues that I

mentioned at the start of my presentation and Council feels, I think unanimously feels, that it couldn't even begin to consider this project unless it was completely satisfied on the basis of the safety and protection of the residents and of the environment in general and that those matters are so important when dealing with a project of this nature that they just totally overwhelm any economic benefits which may, in any short term, I might say, be economic benefits which may be achieved.

MR. CHENG: Thank you.

THE CHAIRMAN: We have kept you for almost an hour and I know there are other questioners. I hope they can be short and hopefully your answers can be, if possible. Peter Bird.

MR. BIRD: Mr. Chairman, I just have one question. I would like to just pursue, if I could, for a brief minute some of the directions that Mr. Shikaze was going along. Is it possible to visualize a scenario which would result in a decision through the Federal process and ultimately a Cabinet decision to proceed with the refinery on the site at Port Granby and yet have the Town of Newcastle make a decision against a zoning request that you talked about and, if so,

what would that result in?

MR. WILLMS: They wouldn't get a building permit.

DR. BIRD: Would that in fact stop them?

MR. WILLMS: I could bring a motion for injunction in the Supreme Court of Ontario, I suppose, if they tried to build without one.

DR. BIRD: Thank you.

MR. LANG: If the refinery was to proceed over your dead bodies and all that, would the presence of a refinery in a waste disposal area change the general use of the whole area, do you think? I would have preferred your planner to be here.

MR. WILLMS: I would prefer that a planner were here to answer that question but I don't think a planner could answer either without giving it some very serious consideration. You face the same dilemma in trying to come to grips with the Darlington nuclear generating station. What is the impact? Does it attract industry or does it repel industry? Are people out fighting to locate around a nuclear generating station? I think it would involve considerable study of perhaps similar

experiences in the United States or elsewhere.

MR. LANG: Okay. One other point: Do you have already a waste disposal facility in this area - that is a fact? When it was re-zoned was it re-zoned industrial to accommodate that?

MR. WILLMS: No.

MR. LANG: It certainly is agricultural.

MR WILLMS: I have the by-law with me. I can't answer that question really without some legal analysis. It may be conforming, it may be non-conforming. If it is non-conforming, it may be legal non-conforming or not, depending when the by-law was passed.

THE CHAIRMAN: Mr. Grant, do you have a question?

MR. GRANT: Three short things. In view of your recent statements, perhaps you are not aware of the fact that Eldorado in fact did file an application to have the area of 50 or 55 acres designated industrial and their application was returned to us because of the overall discussion, the Regional Municipality and the Town of Newcastle and we have to look at that. I wanted you to be aware of that.

The second thing is I wasn't sure you gave Dr. Bird a very clear answer to his question concerning the possible location - I am sorry, as to the availability of an industrial site, of a magnitude sufficient to accommodate a refinery on some other location in the Town of Newcastle, short of the Darlington site. Are you saying there is such a site in the Township?

MR. WILLMS: I am saying there are lands designated in the official plan in both the Township of Darlington official plan and Regional official plan for industrial development. Whether those lands would in any way satisfy the requirements for this site I cannot answer.

MR. GRANT: The third thing is a very important issue. Once again - I know you are not involved in these discussions but I have personally had a number of lengthy meetings with the Industrial Commission, both local in the Town of Newcastle, had meetings with the Regional Industrial Development people and we had endeavoured at that time - and this is in the form of a communication from me specifically to the Town, what we suggested to the Town of Newcastle, what I thought was acceptable particularly to the

industrial community concept someone alluded to whereby we might end up in effect, with the blending of responsibilities and because of the comprehensive nature of the matters to be dealt with in the process and because of the size of the Panel, it be devoted as a Town being to the term you used "technical environmental issues".

It is my understanding with the Municipality that when it came to the kind of area that the Municipality would probably be satisfied with the decision of the Panel. However, when it came to the more mundane things, and that is particularly true because the Municipality doesn't have the kind of human resources really to look at the technical environmental things, but when it came to the kind of mundane things that Municipalities deal with on a day-to-day basis, zoning applications such as specifically roads, services such as water and sewage, et cetera, et cetera, that we would be back talking to the Town of Newcastle and talking with you as the representative. That formula had a great deal of appeal to me and I thought it did to the Municipality.

My question really is, is it your understanding that the Municipality is no longer

interested in that kind of a format?

MR. WILLMS: Mr. Grant, that is the longest leading question I have ever been asked to deal with.

MR. GRANT: I hope you don't interpret it as being leading.

MR. WILLMS: There are an awful lot of factors you have itemized and I don't think I can answer that question with a simple yes or no. In terms of reliance on the Environmental Assessment review process, as I stated earlier, the Town will indeed place a tremendous amount of reliance on that process and the fact that we have asked certain questions today of Eldorado Nuclear does not mean in any way we are not relying on the Panel or that we intend to start our own scientific and technical evaluation of these documents.

I think that the Town cannot abdicate its decision-making power or any element of its decision-making power and my perception of the feeling of Council is that they do not intend to do so, albeit that they are aware that they will have to rely heavily on technical assistance in evaluating the proposal.

Does that answer part of your question?

MR. GRANT: I am concerned if you are anticipating we are going to have another round of environmental hearings, I ---

MR. WILLMS: Can I interrupt? I would suspect that perhaps your cross-examination in a sense of me is not the most effective way to discuss these issues and perhaps it would be better if we - that these issues are explored across the table rather than across the floor.

THE CHAIRMAN: I was going to suggest if there are no other questions we might have a short coffee break of five minutes. I'll see if there are a couple of questions first.

If it is acceptable to you, gentlemen, perhaps you could make a brief statement after coffee break to clarify this.

MR. GIMBLETT: I am having a hard time trying to see just what you mean by those statements. It is my understanding that when the Town of Newcastle originally asked Eldorado to consider the industrial site that they had on hand in the western portion, that the main reason for not going to that industrial site was the absolute need for immense land control. That site was not large enough. That was my understanding.

MR. WILLMS: That may be the case. I have no information. If there is any serious consideration of any other site in town ---

MR. GIMBLETT: They did ask them to consider that other site. I think the reason for not considering that site, or one of the reasons for not considering that site was that the site was not large enough. The reason that was not large enough was because of the lack of exclusion there, in all these terms. The point of view has been an exclusionary area is an arbitrary decision on both their part and the Panel's part. It could possibly not be necessary.

THE CHAIRMAN: I think we are perhaps getting off a little on a question of clarification. We have been over that area a number of times and I think the Panel is aware of the concerns about the exclusion area.

MR. GIMBLETT: What I am trying to get is that is a rather confusing situation. Can you clarify that at all?

MR. WILLMS: No, I am sorry. I really can't. I can't comment on the size of the exclusion area. I can't comment on your suggestion that the Town had been asked to consider other sites.

I was not aware that the Town had been. You know, if you say they did, they probably did.

MRS. COWMAN: Thank you.

And, there has been a lot of talk taking place and I want to take you back to the comment you made about special studies. You made a very impressive list of reasons for the Town of Newcastle wanting all these hearings to consider this, that and the other for various reasons and you related that to the special study and the re-zoning. I think someone asked you if the Darlington generating site which was also classified as a special study in the Regional official plan, if it had been re-zoned. I believe your answer was it was in the process of.

Would you clarify that?

MR. WILLMS: It has not yet received an application from Ontario Hydro to re-zone that portion of the site which needs re-zoning. Most of the site is already pre-zoned as industrial.

MRS. COWMAN: Industrial development I believe the term is.

MR. WILLMS: Whatever. To my knowledge Ontario Hydro has not yet submitted an application to re-zone.

MRS. COWMAN: But the Town did

accept Ontario Hydro's environmental assessment. They did not have other than Hydro's, which in this case is Eldorado. Is that not right?

MR. WILLMS: It is not correct.

MRS. COWMAN: With modifications, but they have changed that special study designation or at least - let me go back - Ontario Hydro started digging holes on that Darlington site, which is shown as a special study area right now, without any public environmental hearings, without any of the things being done you are asking for today.

MR. WILLMS: Right.

MRS. COWMAN: Thank you.

DOROTHY BOULTON: You mentioned one of the considerations about considerations on a waste disposal site. Would Eldorado consider locating a refinery here and a waste disposal site elsewhere? Since there is already a waste disposal site here and their projections are to enlarge this site, to my understanding anyway, could you tell me how the Town of Newcastle would feel if it was decided to put a refinery elsewhere and have the waste disposal site here?

THE CHAIRMAN: Perhaps you can either say yes or no, bad, good or indifferent,

rather.

MR. WILLMS: That is difficult. I think if there is any particular aspect of this operation that is concerning Town Councillors the most at this stage, it is the proposal for the waste disposal site, particularly in view of the fact that only 11 pages of this whole document was devoted to a description of the waste disposal site and in view of the fact that no other alternatives had been considered, so I would suspect that they probably would be adverse.

THE CHAIRMAN: I think we are getting around the hypothetical. We agreed two weeks ago that we would ask that in far more detail in Phase II and perhaps whatever comes out of that will enable Newcastle to take a position on the subject that is more definitive.

Is that all right with you, Miss Boulton?

MISS BOULTON: Yes. I have one other short question, if there is time.

THE CHAIRMAN: Okay.

MISS BOULTON: At least I will try

to make it as short as possible.

This is asking you to compare something, Mr. Willms. Eldorado Nuclear has gone to a great deal of expense and time to prepare this Environmental Impact Study and it is very expensive. The Town of Newcastle is not willing to accept it as it stands now, but, however, there is a contradiction in terms here somewhere because the Town of Newcastle has accepted Ontario Hydro's environmental impact study by signing a document which said they would not oppose Hydro when they asked to be exempt from the Environmental Assessment Act of the Province of Ontario. Can you explain why? These are two nuclear facilities going to be producing radioactive waste.

MR. WILLMS: I don't think it is appropriate for me to gointo that at this time, for a number of reasons, not the least being time considerations. That is a very, very complex issue.

Let me simply reiterate that the Town of Newcastle Council did not "accept" Ontario Hydro's Environmental Impact Assessment either.

THE CHAIRMAN: Thank you. Can we take six minutes for coffee?

--- Recess.

THE CHAIRMAN: Could we reconvene, please?

Ladies and gentlemen, we can't start until everybody is here. Can we reconvene, please?

Ladies and gentlemen, we have been able to adjust our schedule slightly and we have two more speakers this afternoon instead of three as I originally announced. Professor Paehlke will speak next and be followed by the Oshawa and District Building Trades Council. Mr. Laird will be the first speaker in the evening session.

Professor Paehlke?

PROFESSOR ROBERT PAEHLKE: I am going - I will try to be as brief as I can although what I have is a quite long brief that I prepared essentially to give the Club Lake Inquiry in Saskatchewan, but I think most of the points I made are pertinent here. I will summarize it and not try to attempt to read everything that is in it and then leave a copy with the hearing.

MR. GRANT: Before we start, are you representing an organization or is this just your own brief?

PROFESSOR PAEHLKE: This is just my own brief. Okay?

The first comment to make before I start would be that there is no real local interest in this document. That is, I am talking about the broad implications of that nuclear fuel cycle, particularly social and political implications, although there are environmental implications involved as well. I will try to emphasize those aspects of it that are particularly pertinent to the export of uranium fuel. I have five major points to make and these are all again so that people understand what I am doing here; these are all broad implications of the full nuclear fuel cycle. That is, these are not necessarily associated in any particular way with this particular development except that if this development goes ahead, the nuclear fuel cycle will be developed more readily in a series of countries and some of these effects will be, you know, in a sense the result of the development of it here.

The first thing, it seems to me, that is generally true of nuclear power as opposed to other energy technologies is that there are associated with it economic and environmental distributional inequalities; that is, those who are well off tend to be made better off and those

who are less well off tend to be made further less well off.

I tried to outline in four or five pages some of the aspects of this, particularly with regard to environmental implications. Just to give a couple of examples, most of the energy generated by nuclear power in Canada is used in large, wealthy cities, obviously Toronto. This is also true in most other countries where nuclear power is used. That is the benefits in terms of jobs, in terms of energy and in an energy-short world in the future this will tend to be more the case. There will tend to accrue to the urban areas that are otherwise quite prosperous relative to other areas of the country.

The least desirable aspect in the nuclear fuel cycle will tend to end up - and this is generally true, in more rural areas and generally in areas with lower average wages. I cite examples and I won't go through them, with regard to Canada and Ontario and Saskatchewan and elsewhere, and with regard to Great Britain, West Germany, Australia and several - U.S., France and other countries, to try to document that is a general point, though it is not always the case. I think

it is generally true and is one implication of what going ahead rapidly with a nuclear fuel cycle means.

I also think it is the case and I think this is more directly relevant here, that there are class inequalities in the distribution of benefits and disadvantages of nuclear power, particularly with regard to the health hazard among uranium miners. I cite material largely from the Hamm Commission Report which I assume has been mentioned elsewhere in this inquiry, that is to say, for Ontario uranium miners there is three times the incidence of lung cancer as in the general population. That is to say, the more uranium that is exported, the more uranium will be mined and the more uranium that is mined, it may well be the case there will be more incidence of lung cancer among those who mine it. I will leave the details of that to stand for cross-examination, if people like. I don't over-state that point, I don't think.

The only other point under this first area that I would like to mention is again with regard to lung cancer incidence and other health implications of uranium mining and that is I would argue that ten years from now we might be better able to cope with the health implications

of mining uranium than we are now and that is to say there is a 20-year time lag typically in health effects. Mining has only been going on since the mid-1950's. We don't know a great deal about it, the situation has improved, I don't dispute that at all, but the point is there is a lot more we probably will know ten years from now than we do know now. Mining will probably be safer at that point. Expansion will probably be safer at that point.

The second area I want to deal with in terms of social and political implications, I began with full nuclear fuel cycle with regard to dangers of theft, sabotage, nuclear weapons functions and political implications of measures used to act against such potential threats. Now, I want to say right at the outset that I see no such danger or at least almost no - there is never no danger, but virtually no danger of that sort of thing associated with this particular facility.

I wouldn't want to be cast as asserting that, but there is the case that within the fuel cycle at other points, particularly at the waste disposal point, reprocessing of fuel after it is used in reactors which is the case

currently, you know, it is being done in Japan and other countries which might be recipient countries of the nuclear fuel that is produced in this plant. That is, there is potential for sabotage in those situations and I simply try to outline a series of reasons for thinking that this is a problematic area and I have cited other Panels and other studies in Britain and elsewhere that might be of use. And statistics like, for example, the amount of uranium and plutonium unaccounted for in the U.S. over the previous 30 years, that sort of thing and the fact that it could, were it actually in the hands of terrorists or saboteurs or whoever, potentially be, you know, possible to make nuclear bombs. I give a lot of evidence why that is the case. I don't want to over-state it, simply to say that it is possible the more advanced the nuclear fuel cycle becomes, the more possible it is. Again it is a remote possibility but it is a possibility that is only associated with nuclear power and is not associated with other energy technologies.

I mentioned the Flowers Report in Britain, a Panel which considered the implications of nuclear power and found that this sort of area

to be more highly problematic than other areas. I tried to document instances where some sorts of threats have been made with regard to some aspects of the nuclear fuel cycle. I find that a fearful world and I find that less problematic in many ways than the other side of the coin on this point and that is what sorts of things might be done in some countries and not necessarily Canada to counter the possibility of some action being taken.

I won't belabour the point to the extent of reading a quote, but I have materials that I have documented and studies by the Rand Corporation in the U.S., a government think tank, that is to argue even democratic governments as the nuclear fuel cycle becomes highly advanced might be forced to the position of doing quite advance surveillance of public groups even particularly of employees and others associated with the nuclear fuel cycle, and engage in a variety of things that many people would see as in some ways threatening to our civil liberties.

I would just like to mention one point further on this and that would be that consider the public reaction even in Canada, a highly peaceful country with a firm tradition of civil

1 liberties to the FLQ kidnapping that occurred
2 seven years ago and then the later implications
3 of that for what has happened in Quebec since.
4 I think you know that the effects in Quebec are
5 different than the effects in the rest of the
6 country.
7 Consider the kind of reaction there
8 might be, what kind of outcry on the part of the
9 Canadian public where a terrorist incident that
10 involved anything nuclear, whether or not it was
11 actually carried out. I would think the reaction
12 and the potential for repression would be
13 considerably larger and I think that is an area
14 that we have to think about as we expand in place
15 after place with the nuclear fuel cycle.
16 The third of the five items that
17 I talked about, the social-political implications
18 of the nuclear fuel cycle is the centralizing
19 character of nuclear power. I simply tried to
20 document why nuclear power is only generating
21 energy in very large quantities per location and
22 I think I have documented that reasonably well.
23 I tried as well to make the point that, where you
24 centralize an energy source, you tend to
25 centralize employment and you will thereby tend to

1 centralize population and you will tend to depopulate
2 less developed areas. One could go on about that
3 at great length. The only point I am making, I
4 think, for the most part is that nuclear power, in
5 contrast to other energy possibilities for Canada
6 or for any other country, will tend to further
7 centralize the economic and political apparatus.
8 That is the main point. I think that is problematic
9 and I go through some discussions and my original
10 field was in part political philosophy. I will not
11 recite it to everyone here except to say that all
12 of the fearful so-called distopias, that is,
13 negative future worlds that are written about in
14 literature, 1984, The Trial, Brave New World,
15 things people are familiar with are all associated
16 with highly concentrated urbanized, over-structured
17 societies and most of the desirable futures most
18 people think about are associated with small-scale
19 rural areas.
20 I will argue that nuclear power
21 will tend to create the former rather than the
22 latter, that is, it is not solely responsible for
23 it but it will urge us further down that road.
24 Most people think we have gone down that road
25 too far already

The fourth point regards the general lack of public knowledge regarding nuclear power and I cite survey research that has been done which shows that most Canadians don't even know you generate electricity using nuclear power and the point I would make is that most Canadians don't know it. What about most people in other countries where that fuel is found? How on earth can they participate in the democratic decision-making about an energy source which is central to the way their society will be structured in the future in many ways if they simply do not or cannot understand it?

Again I elaborate that point further and I won't go on with it too much.

Just to make a final point, trying to do this in 15 or 20 minutes, if I can. Another area I will just mention, look at future trend of the nuclear fuel cycle, things which are further down the road, 10 years, 20 years down the road and my general point is that all of the things I am worried about earlier in the paper are items which will be increasingly problematic in the future, as near as one can tell at this point in time. I will just mention that and it is there in

the brief which I will give to the panel and make my last point now.

All of these things I have talked about, I think generally speaking, although it is not always the case in every situation, carry problems of nuclear power in its wake will carry with it problems for us in a democracy both in its democratic aspect, that is, can people understand the technology they are dealing with, having to make decisions publicly and in its liberal aspects, that is, if there is the threat of terrorism, what sort of climate would be created where they have the development of nuclear power. If those things are a problem in Canada where you have a diverse, stable country with a long tradition of democracy and liberalism, what is the effect of exporting, making possible the advancement of the nuclear fuel cycle in the variety of countries that might be the recipients of the fuel that will be produced here?

I tried to document briefly some of the countries that in the end might receive it. You can consider Argentina where there have been 30 different illegal political regimes since World War II, and you can go through many other

countries that might well be direct or indirect recipients of this fuel, or the technologies developed by using this fuel.

South Africa would be another, although it by no means automatically exported to South Africa, I am sure, and Canada will tend not to have that be the case. There will be indirect benefits accruing to countries like that.

I will let it rest there. Those are my general concerns. How they apply to this specific situation, I would hope that, you know, one can't predict what the future will be like precisely and, therefore, I would not suggest that a Panel such as this try to make a decision which is binding forever more, but I would hope that given the problems that I and others have raised, that there would be some delay of this sort of project.

Again, I am raising all of these concerns but particularly because this is a facility whose product is virtually strictly for export and with it we are exporting a variety of problems that many other countries may be unaware of.

I will let it rest at that.

THE CHAIRMAN: Thank you, Professor Paehlke. I hope you will leave a copy of your brief with us?

PROFESSOR PAEHLKE: Yes.

THE CHAIRMAN: Are there any questions?

MR. LANG: Do you foresee the building of the uranium refinery here and perhaps in Saskatchewan as well as constituting nuclear power in Canada?

PROFESSOR PAEHLKE: I suggest that particular facility - I hope I understand it correctly - that it is uranium hexafluoride that will be manufactured, the bulk of the product will be exported. That is to say I see it as a commitment to considerable exports of uranium in the future.

MR. LANG: I can see that too. What I am not sure about is whether there is a relationship between building up this kind of facility and exporting uranium and having nuclear power in Canada for Canadian use. Is there a connection there?

PROFESSOR PAEHLKE: Yes, I understand that uranium reserves in Canada are

the largest in a developed country. I assumed they could do both, but I don't know - one of the things that would worry me, I think, about this particular facility, would be the ability that you would have domestically to produce enriched fuel which we heretofore have not used extensively and I find that my feeling is that producers tend to style reactors that don't use enriched fuel - other people have told me, you know, that is the case, that they are safer; so that once you have a facility that makes enriched fuel, this might be encouragement to build enriched fuel facilities here. Otherwise I don't see this as particularly, you know, encouraging the nuclear fuel cycle in Canada.

MR. LANG: Just to follow up on that, much of your brief seems to be directed toward the political implications of going to nuclear power as a source of energy in Canada rather than developing refineries to do processing for export.

PROFESSOR PAEHLKE: Okay. I think the generalization I would make and why I think it is pertinent here would be this: I look at Canada because I know Canada. I don't know a great

deal about Argentina, but I would try to make the point that whatever problems that Canada would have both socially and politically with a nuclear fuel cycle, most other countries would cope less well, that is, most other - Canada has a 100-year tradition in terms of liberal democracy at least, if not more, whereas many of the European countries' experience really dates back 30 years or less They are historically more unstable and thereby I would think more problematic for them than for us.

That is why I think that whatever - I skipped over some of it. I think in the latter parts some points about for example with Argentina, it is a political economy that has been generally criticized more so than Canada for being overly centralized. That might be the case in many of the other countries too. I will let it rest.

DR. BIRD: Mr. Chairman, I am not sure that Reg got the answer to the question I thought I heard him say, and I will try to phrase it. I understood you to voice your concerns in such a way that they would apply to a large measure in Canada as well, the inequalities and so on that you are talking about

as a product of a nuclear - what should I call it - a nuclear society would occur in Canada too and therefore I deduced and I would like you to confirm this, but that you are opposed to any further development of nuclear power, the nuclear fuel cycle, which would include no more nuclear power generation in Canada. I would like to ask that first. Is that fair or not fair?

PROFESSOR PAEHLKE: Okay. I am going to give two answers. The first is, yes, it is the case. With regard to inequalities, I had really not thought about this. In a sense Canada is becoming the hinterland and wherever that uranium goes is becoming the metropolis, that is the benefits, the energies are accruing wherever, Germany or Japan and, say, and some of the major disadvantages, the health disadvantages with regard to mining are occurring in Canada. That is one part of the answer.

With regard to would I be opposed to all nuclear developments within Canada, the only way to really answer that is I would certainly oppose any further growth of the nuclear fuel cycle in Canada unless there was demonstrated to me there was no other energy possibility and I

don't take that to be the case certainly in the short term in Canada. Certainly there are variety of things where you can work out 40 or 50 indefinite futures without it, although I remain open for someone, you know, for us to see 20 years down the road that solar is totally impossible in Canada economically, environmentally or otherwise. In fact, under certain circumstances I would say, you know, rather than disrupt society in an extreme way, we might have to go ahead with some nuclear developments, but generally speaking as slowly and carefully as possible.

DR. BIRD: You are prepared to disrupt other societies that might suffer energy crises but not us, is that it?

DR. DEROW: No.

PROFESSOR PAEHLKE: That is a different question.

DR. BIRD: It seems to me a logical deduction from what you say, that we should not export any nuclear fuel. The only other alternative I can read is, let other uranium suppliers provide the world's needs outside Canada but let Canada not do it.

PROFESSOR PAEHLKE: I have

not elaborately worked out our position on this but I would say that to certain countries under certain circumstances, you know, if I were the person making the decision there might be circumstances under which exports would be allowable but I don't think on the whole - I mean what I am worried about particularly is Canada's ability to get its own way in the safeguards and negotiations, even granting that Canada would force more stringent safeguards than other exporting countries.

The U.S. has granted to Japan the right to engage in reprocessing. If the U.S. granted that to Japan with their economic policy vis-a-vis Japan, what would Canada do? My feeling is that if a facility like this were built, and I think this is another important point, if a facility like this were built there would be increasing pressure on the Canadian Department of External Affairs to use what is produced in it. Therefore, they would be in a more difficult situation when it came to negotiations.

DR. BIRD: If the reprocessing facility is built in Canada?

PROFESSOR PAEHLKE: If the Port

Granby facility were built so we had large amounts of uranium hexafluoride stockpiling rather than raw uranium ore. Since that would not be usable in Candu reactors, it would have to be sold somewhere and the negotiations are going to go on again, I believe, later this month in Washington with a variety of exporting countries. If there is a commitment to go ahead with this sort of facility, obviously one facility is not permanent.

Canada's position, especially after the facility is built, if the negotiations were still going on, which is possible, Canada would have a difficult time demanding "No exports until you (a), (b), (c)."

DR. BIRD: Presumably the Canadian government will have either reached agreement or determined it is not going to reach agreement on the safeguards issue with a number of countries before the final decision is made to proceed with the 80 million dollar construction of the uf_6 plant we are talking about and under those conditions if they have reached agreement, you are now saying, if I read you correctly, that you will be satisfied to see us export uf_6. Is that fair or not?

PROFESSOR PAEHLKE: No. It is very hard to anticipate something that hasn't occurred so I am going to hedge a bit here. It would be my presumption that the kinds of things I would like to see Canada negotiate, safeguards would be far more stringent than the Canadian government would want, even if it got exactly what it wanted to have as safeguards. I mean I know that generally they are looking for it and I certainly think that is preferable to not having it, but there are a variety of other steps that many who are concerned about the sort of thing as I am would want to stipulate.

DR. BIRD: Let me back off for a moment and say if we don't build the uf_6 plant would you be in favour of exporting the yellow-cake to some other uf_6 producer?

PROFESSOR PAEHLKE: There are several things can be said there. One would be that if we were not, you know, making the fuel so readily enrichable, so easy to engage in the enrichment process, you would be more likely - Canada might also sell Candu reactors which I take it is safer generally than the non-Canadian reactors I mean that is one point to be made but

not the crucial one. I mean just in general I am opposed, as I have said, to the expansion of the nuclear fuel cycle, though not in every last case and I don't propose dismantling what has been done and a nuclear option might be really - I can see where a nuclear option would be vitally important to several countries, particularly West Germany and Japan and can I imagine circumstances in which I would think exports to them could be justified, though it would require them to do a variety of things they haven't done. For example, stop - I mean increased energy conservation measures, that sort of thing, even a longer list than that, agree not to engage in reprocessing.

DR. BIRD: You would place those same restrictions on the yellow cake as uf_6?

PROFESSOR PAEHLKE: Yes, I can see a distinction there.

THE CHAIRMAN: Thank you.

DR. DEROW: It is intriguing that you go into the world-wide implications of the decision to us today. We have heard from almost every level, we heard from individuals, municipalities just before you. This morning we heard from the MOE. I enjoyed listening to you.

I put all your points into the Federal frame of reference . But in terms of our role in making public policy, how do you feel - how you reconcile the implications at all these different levels in terms of putting together our report?

THE CHAIRMAN: Briefly.

DR. DEROW: Is this all the time we have?

PROFESSOR PAEHLKE: It is much easier to be a witness at one of these things - I am well aware of that. The last thing I ever thought I would want to do would be to sit there and make the decision, even with all of the implications of the project. You know, in a sense it is asking if it were the case that some aspect of the fuel cycle were of enormous economic benefit to an area, it would be asking an area to make a sacrifice for wider global concerns I don't know if that is the case in this particular area. I just heard a bit of the previous speakers this morning.

There was a universal enthusiasm anyway. How does one reconcile all of these things? You scratch your head and say, "What has priority over what?" The only thing I can say

is that there is no world-wide sovereign political jurisdiction and it is a world-wide problem. The only sovereign political decision-making bodies are national and perhaps the only - the only bodies really these days that are considering in detail all of the arguments that are involved are bodies such as this that are given an extended period of time and allowed to listen to a wide variety of opinions and have cross-examination and everything else, and that seems to me as fair a way to proceed generally with making these kinds of decisions as any I can think of.

You know, I am a strong liberal democrat and want to argue and want to take it to the public process and debate it publicly in an election campaign but I sit back and shake my head at the prospect, the distortions that would occur would be much greater, I would assume, than when it is discussed calmly and deliberately. That is helpful.

Therefore, if you can't decide. Who can?

THE CHAIRMAN: Thank you, Professor Paehlke. Are there any questions from the Board?

Thank you again for your presentation. We will look forward to reading the brief.

The last speaker for the day is the Oshawa and District Building Trades Council. I am sorry, it is our last speaker for this session.

MR. HILL: Mr. Chairman, members of the Panel, my name is Bob Hill and I am the business manager for the electricians in Oshawa and District. My mate with me is Mr. Quentin Beggs, business manager of the carpenters in the same area.

We found ourselves in an unfortunate and embarrassing position last week by attending some of the hearings, deciding that the facts and figures were not our game, went out and hired what was supposed to be professional assistants. For the benefit of anyone who was not there, on Wednesday our assistants were terminated very shortly.

What we have today is an attempt to create, we hope, some interest with the panel and with the general public as to the problems that we have as construction workers in this area.

So I would just like to read it through, with your indulgence, please.

The Oshawa Building Trades Council represents fifteen separate trades. We represent a total Membership of 5,000 union tradesmen of which the greater percentage reside in the Durham region.

Speaking on behalf of the Building Trades Council, I feel compelled to inform you that, contrary to certain allegations of the media, we do not endorse the construction of projects which we do not believe are safety controlled, for the sake of jobs. We request that we go on record that we are responsible residents of this area who will still reside here after the refinery is built, if approval is received I myself was born and raised in the town of Port Hope and now reside in the town of Cobourg and have no intention of leaving now or in the future We request your indulgence in allowing us an opportunity to explain our function as a Council and opinions as residents in endorsing the construction of the refinery in Port Granby.

The history of area unemployment - and I would like to qualify here that I have only

been a business manager for three years. The business manager is an elected position so I have been working on the tools prior to this, but as history as far as the Building Trades Council is concerned, in this area, there has been a steady erosion of employment in the Durham Region since the Spring of 1969. The statistics available from the Unemployment Insurance Offices and the Manpower Centres in this area will verify only too well this statement. Not to confine these stats with this area only, we can simply read the newspapers and listen to radio and television and find we are not unique in the country of Canada with this problem. Therefore as a Council we implore you to consider the effect the construction of the refinery will have on the unemployed members we represent.

The effects we have found as business managers with construction people of this area in unemployment, the effects that the unemployed construction worker feels are very complex in nature. The lack of progress in various municipalities and the over-abundance of progress in other areas simply tend to frustrate the man as to what area he can economically decide to reside in, on a

permanent basis. The financial waste that we as tax-paying residents must face when industries are repelled from our area, when they wish to either locate or expand will in no way ever be solved if we continue to say no. The increasing cost of living in this area can only be offset by permitting industrial growth. The construction worker has at his disposal a vehicle which is termed as a "skilled tradesman" and can sell his service only in areas where progress is being attained through building. The worker frustration then becomes most evident when he has to decide whether to commute or pack up his family and move with progress. I must state here that we do not want to create a group of Nomads but I am afraid that it is happening.

The economic results of area unemployment. The most obvious result of unemployment in this area is the exorbitant amounts of money which are being paid out to the unemployed via the Unemployment Insurance and Welfare in order to finance the worker and his family when there is no alternative but to apply for relief.

Secondly, the financial waste involved - I would like to emphasize on this second

point if I may, because I eventually will probably have to enlarge on it again. The financial waste involved by parents in keeping our children in school, to graduate from the Science, Trades and Technology courses and no jobs are available. The growth of organizations such as our own depends solely on building progress, but we presently are turning away applications from the graduate who qualifies for our apprenticeship programs when we can't even keep our current members working. This becomes very expensive to those who are working.

Thirdly, the government retraining plans again are a waste of money if a lack of industrial growth dictates no job for the retrained e.g. abundance of teachers with no place to teach, the abundance of nurses when hospitals are forced to cut back their present staffs, and the list can go on.

No. 4 - I am speaking primarily for my own local, in this instance. The economic loss to the local store owners when families are forced into leaving their homes,whether it be permanent or temporary, must be pointed out. Relocations that I have found in my own people

are members that are packing up their families and moving into the Sarnia area to work in the Chemical belt taking up their families and moving to Douglas Point to work at the Nuclear Station and even as far as the Tar Sands to work on the oil fields.

These are facts, not fiction and the purpose of the relocation is to stay off relief because again, contrary to allegations, we are not happy to stay at home on relief, we are a proud people who do not want welfare.

Conditions - We as building tradesmen feel that we would like to propose to Eldorado.

As a Building Trades Council and from our various memberships we have a few conditions we would like to propose to the Eldorado

1. As residents of this area we demand 24-hour monitoring, both inside the plant and outside the plant. We feel that questions which have been asked during these forums by the adjacent owner groups and other interested progressive groups are the result of concern which can be and have been answered by yourselves.

2. All of our workers must be familiarized with the safety precautions you now have in service for the safety of the inplant worker. Failure on the part of our workers to adhere to these policies will dictate immediate dismissal of our workers, and that is difficult. As I have just mentioned, we are relocating our families out of the area. The jobs are not that available that we keep the safety of the inplant construction worker to treat it as if he wants to do what he is supposed to do or he has to.

3. Results of the monitoring be released to the residents whether by press, radio and television on a predetermined schedule which would create good public relations in this area. These reports would include water purity and air purity,et cetera.

In summary, we of the Building Trades Council sincerely feel that should the Refinery receive approval for construction, this area can become one of the most highly valued and equally balanced areas in which to live, work and play. We envision a growth in this area which will result in the following:

1. An opportunity for the unemployed statistic

to stand and be counted as responsible citizens of this area instead of the responsibility of the area.

2. A situation where the ore will be mined in Canada, transported in Canada, refined in Canada and the finished product be sold from Canada. That has to be progress, as a result of Eldorado

3. What we term the spin-off industry. The spin-off industry would be commercial development, shopping centres. At present all we have to do is look around and see the ever-increasing number of empty homes, both new and old in this area

What I am trying to say there is that the government people that we have been dealing with last year concerning the unemployment - we kept getting this song and dance from them that we had to have our residential building. Well, you can build all the houses you want but if you don't have anybody to buy them, it is an awful waste as far as we were concerned.

4. The students will have incentive to complete their education with an active career goal on graduation instead of what is happening today.

5. The empty residential developments, as I said before, would not be empty if progressive area growth allows the residents purchasing power.

In conclusion, respectfully we request the panel to consider the plight of the construction worker. We do not want to move from this area, but the man who only visits his family every weekend because he has to live out of a suit-case finds it more difficult to leave each week. His only alternative is to move, and I ask you, is that progress?

We feel that this project can be built safely and operated safely. We want to be recorded as being in favour of the Refinery being built at Port Granby.

Respectfully submitted, Robert Hill.

THE CHAIRMAN: Thank you, Mr. Hill. Any questions from the panel? Reg Lang.

MR. LANG: I guess you have some feeling that if the Refinery were to be built a significant number of construction jobs, perhaps all of them, would go to members of your local?

MR. HILL: Not necessarily so. We have in the Oshawa area and we have had it for

the past five years, a possibility of major employment for our people. This has been going on for the past five years. During those five years that we have been expecting the work the memberships of our different locals have been taken into the areas such as Sarnia, Toronto, Windsor, areas that have work have allowed our people or offered our people work. They have gone down there.

This fall right now, out of the three places I mentioned, we have people who have relocated. The jobs have tapered down. There is no call in the Tar Sands, there is no call in Sarnia. At Douglas Point, well, that is up and down like the proverbial toilet seat and we don't know what is going on at Douglas Point as far as the manpower call.

MR. LANG: Would you identify your group? It covers a pretty large area?

MR. HILL: Electrically it covers the Rouge River on the west through the Hastings County line on the east and in the north to Victoria and Peterborough Counties.

MR. LANG: What would be the number of members that you have in that area?

MR. HILL: The number of members I have in my local, 300 members.

MR. LANG: In the Council that you represent?

MR. HILL: In the Council there would be 5,000 people represented.

MR. LANG: What is your representation in terms of employment for your members? Do you expect that the jobs would go to your people?

MR. HILL: I would certainly hope so.

MR. LANG: I guess you must expect some of it quite strongly.

MR. HILL: We are asking that we would be recognized by the Eldorado should approval be given. I can most certainly guarantee you that the time being spent by ourselves attending the hearings, and trying to learn what is going on, and if the Eldorado were to turn their back on us with approval, they would certainly see us again.

MR. LANG: Do you have concern about the kind of boom and bust problem that goes not only with this kind of project but also the two other major projects, that you suddenly create a large work force and then it goes down?

MR. HILL: We actually feel in the situation in Sarnia, as stated to ex-NDP members prior to their relocation, that we felt that this area was being choked off because Sarnia required manpower and he maintained we were not being choked off, that there were numerous residential developments going on. The residential development does nothing for me or for my union. We get nothing out of it. What we do get is a lot of visitors in the area. We get a panel truck with a group of people in the back of the van. The door opens and go to work for the day and they get back in the truck and go back to Toronto. We felt that there had to be something going on to choke off a complete area.

I had upwards of 60 people from the local working in Sarnia all last winter. It just does not make sense to me that one area can be that hot, as Hades - I guess that is a bad word to use - one area can be as active as they had been and this area had absolutely nothing.

MR. BEGGS: ~~Relevant~~ to the question that was asked there, I am one of the guys who relocated several times. As you can hear by my accent it was far away. Anyway, our

membership as we laid out in this brief, we see this area here as the first time ever our guys do have a chance to settle down and raise their families in one area because the Government of Ontario told us - there is talk about construction workers - I am just a construction worker and I am sitting here today listening to people say that there is that special study again. What is this area? The government has been telling us - we have been reading in the newspapers for ten years that this area east of Toronto is going to be a development area.

So our membership have moved here and relocated here and bought homes in the hope that presuming these projects are going to go ahead and that we are going to carry on and be able to live our lives here. That is our view.

THE CHAIRMAN: Thank you, Mr. Beggs.

DR. DEROW: I wanted to ask you about your data on increasing numbers of empty houses I thought there was a housing crunch. As you point out, it would provide work for your local ---

MR. HILL: If the housing crunch

is that serious, they have to drive no further than Cobourg. There was a brand new development put in two years ago of 12 houses, two of which are being lived in today. There had been too many houses put in all at once and it commits suicide. Out where I live, I am in Hamilton Township. The taxes go up and, you know, constantly the taxes go up. And we have no industrial offset to our taxes.

DR. DEROW: Could we find out a little more about the total housing picture?

MR. HILL: Port Hope would be a prime example but a poor example too. I don't really have an actual count on the homes, but a simple drive from 401 up to the City Hall or the Town Hall here, I think you will count in the neighbourhood of five for sale signs along that road. I don't know whether they are moving because of unemployment, but it does seem strange to me that - I don't think people can afford to buy houses today when there is no work for them.

THE CHAIRMAN: Thank you. Are there any questions from the Board?

MR. GRANT: Not just a question but perhaps a comment on the condition you

mentioned, Mr. Hill

Condition No. 1 concerning monitoring, Eldorado definitely will be agreeing to monitor. We can't say each item will be monitored on a 24-hour basis because from a technical point of view it may not be appropriate to do so. Yes, we will monitor.

Secondly, as you perhaps know from involvement with Eldorado, we will in fact work out safety precautions and assist the employees with them.

The third question is a little more difficult with respect to publishing results of the monitoring. We think it would be better if those results were published by the Ontario Ministry of the Environment. We are doing our own monitoring. We are concerned there may be some difference in our statistics at any point in time, but we can measure it. More importantly, we think it would be more acceptable, particularly from what we have heard about our lack of credibility, that those monitoring statistics, if published, at least have the stamp of approval of what appears to be an independent organization.

MR. HILL: Yes.

THE CHAIRMAN: Thank you, Mr. Grant.

JOHN VELDHUIS - Resident of Port Granby: I had three and now only two questions. No. 1, Mr. Hill, can you give me some idea is the unemployment figure of this immediate area, Newcastle and the township, higher or lower than the Ontario average?

MR. HILL: I am paid for taking care of the unemployed in the area of my jurisdiction. I openly invite yourself if you would care to attend with me on October 20th a meeting that we are holding to nicely and politely turn down applications from apprentices. No doubt in your time teaching in this area to students you have had yourself the unemployed ---

THE CHAIRMAN: You haven't answered the question as to what is your impression of the unemployment in this region as compared to the rest of Ontario.

MR. HILL: We have taken our own study with the Council of Trades and we range between 20 to 30 per cent unemployment.

MR. VELDHUIS: In this area?

MR. HILL: Yes.

MR. VELDHUIS: My last question, from your perspective would that area of Northumberland County be equally suitable for this proposal rather than Port Granby?

MR. HILL: If we had another site available in this County ---

MR. VELDHUIS: I mean in the Northumberland County.

MR. HILL: In my area? Yes, I would take it in Northumberland, gladly.

MRS. LAWSON: Pat Lawson from Port Hope.

Mr. Hill, I really sympathize with the problems you dealt with. However, there are other areas of concern and I ask you what is the policy of the Building Trades Council vis-a-vis the fast-diminishing agricultural lands in this province?

MR. BEGGS: I am very sorry to put it as bluntly as I am going to put it. I am going to put it very blunt. There is no good growing 50 acres of potatoes if we can't buy the potatoes and we must have jobs to buy the potatoes.

THE CHAIRMAN: Thank you. Next speaker.

MARJORIE ASHBY: (Of Port Britain) Can you explain to me why there are only 17 members and 23 from this area working at the Ontario Hydro technical site and over 355 already employed there and would that ratio be any different at the Eldorado plant?

MR. HILL: Speaking as an electrician, Ontario Hydro have an electricians' union of their own, which is called Local 1788. My Local 984 in Oshawa, I deal directly with the sub-contractors. Ontario Hydro, Local 1788, covers all the construction of the buildings that belong to Hydro. The in-plant maintenance possibly is sub-contracted and I would be able to supply that sub-contractor to tear down installations other than that, as soon as 1788 personnel are all to work then I have the first call, which is very nice of Ontario Hydro to give me. The Ontario Hydro Local numbers, I believe - I may be incorrect in the figure but I believe it is 3,000 in number, the Local itself. I am only speaking for electricians.

MRS. ASHBY: Thank you.

PROFESSOR GOERING: Mr. Hill, would it matter what type of construction you worked at? Does it have to be, for instance, what

is perhaps a labour poor industry as opposed to a labour intensive industry? What I mean by that is, supposing you are going to build a large Post Office, which is almost entirely run by computers now, and your people are having some problems getting work, would it be better to build something like that, which is something like an atomic-connected appliance or would it be something like re-cycling plants where there would be work literally pretty well forever? What about the boom and bust situation?

MR. BEGGS: Maybe I could give you an answer. My personal view and my representation here and it is better we are not talking about jobs alone here. As far as we are concerned, Eldorado is the first part in a link and then you have that nuclear power that supplies energy which in turn supplies the factory in which people work. If we are the first person on it to do the building of these industries and basically we are backing this project for that simple reason, that we feel you must have the fuel to fill the power plant and the power for that fuels the factory and the factory creates the jobs. That is how we look at it.

PROFESSOR GOERING: This plant is producing fuel for export and therefore it is

not going to be a nuclear plant directly related to the area.

MR. BEGGS: We are here basically as tradesmen and I think the question has been answered today back and forth across this hall with regard to the export side of it. Again we are producing a fuel to be used all over the world and we all know that Canada has a balance of payments problem the same as everybody else. They asked us on several occasions, do you want us to produce more raw material for the rest of the world and not finished goods? We are simply going to have to finish the goods in Canada instead of sending out the raw material.

PROFESSOR GOERING: Is it not going to lead to - I'm asking a hypothetical situation - you have a terrific power plant here and all kinds of people working, and in the Yukon they are having considerable difficulty with everybody going around looking for jobs but there aren't any. Then we have had a construction peak and then there is nothing to do.

THE CHAIRMAN: They were asked about boom and bust and did give a reply. You may not agree with it ---

PROFESSOR GOERING: It wasn't exactly clear. Look at just the short term, the boom, there is just not going to be that kind of boom.

MR. HILL: Hopefully, Professor Goering, the boom, if Municipal Councils, Municipal Governments would take an honest look at planning and probably the best example of boom in this area is you would have to look at Peterborough. For years nothing happened in Peterborough and then all of a sudden in one year they put up the Peterborough Centre, the City Centre apartment complex and a parking garage, an addition to Trent University and since that year nothing else has come up. In the City of Peterborough we had in the neighbourhood of 10,000 people registered with Manpower. The Town Planner, the City planners - we are dealing with Eldorado because Eldorado is a possible go, with approval, we would be dealing with what we as business managers consider industry starting out, we try to meet with those people and offer the services of the people we have and we have a number of people there.

PROFESSOR GOERING: Thank you.

THE CHAIRMAN: Thank you. If there are no further questions, I think we might adjourn.

--- **Dinner adjournment.**

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--- On resuming at 7:15 o'clock p.m.

THE CHAIRMAN: Good evening, ladies and gentlemen. Can we come to order, please? My name is John Klenavic. I think most of you have heard my speech. If there -- could I have a show of hands of how many who have not heard my opening speech and that will tell me how fast I have to make it? I might say briefly this is the final evening of our phase 1 hearings and this evening our procedures will be modified from the past. After we have finished with the first intervenor this evening, I would like, in the case of Mr. Laird, we will follow our normal procedure of the intervenors speaking for 15 minutes and I think following that, I will outline what we would like to do with the rest of the evening and also the procedures that will be followed after this for the benefit of other people here.

We might at this time proceed with Mr. Laird as speaker and then I will come back to clarify what we are doing after that.

BRUCE K. LAIRD, called

Mr. Chairman, panel members, members

of the public and the audience, my name is Bruce Laird and I represent a group of Port Granby area citizens and landowners, including Edna Webster and Margaret Elliot, Pauline Payne and Telmig Corp., F. Maurice Desourdy and Doris Desourdy, David Grant and Donna Grant, Howard Hubbard and Mary Hubbard.

I appreciate, Mr. Chairman, the opportunity to make my comments at this time. I had spoken once before at the beginning of the hearings and during the course of the hearing I think that the people I represent and I have learned a great deal. The brief that you have before you now represents a more crystallized opinion on a variety of subjects and questions which I believe that you and the panel are interested in.

Our position at the beginning of these hearings was that we had come to listen to the proposals of Eldorado Nuclear Ltd., and to consider the cost-benefit analysis of the project with respect to ourselves and the public at large. We also came to hear the contrary arguments, particularly with respect to technical opinions of the EIS and the positions which Eldorado were taking. In other words, there were always two sides to every issue and, not being technical or scientific people, we wanted

to hear both sides of the story.

With the limited time, money and other resources available to us, both before and during the hearings to consider the ENL material, we are just now beginning to absorb some of the significance of the consultants' report. ENL's tactics throughout these hearings has been to attempt to dominate the proceedings by attempting to reduce the credibility of the questioners rather than answer the questions in a way that can be understood by the intervenors and other participants. We have, Mr. Chairman, received no satisfaction in what we have heard from Eldorado and in fact, our concerns have been compounded by the questions raised by the panel and other questioners and the selective and inadequate responses of Eldorado.

The opinion of our group is not unanimous, but the majority does not support this project with respect to the refinery or the dump site. We have formed the opinion that this project will proceed however, Mr. Chairman, notwithstanding anything that may transpire at these hearings. We are, therefore, concentrating our efforts on protecting our position as citizens of the immediate area and adjacent landowners.

When the current dump site was established at Port Granby, our group accepted that fact. As more information has come to light from the scientific community with respect to the dangers, this support has diminished. The fact that cattle have died in the area around the existing dump site is of great concern. We have no confidence that moving the current dump site to the proposed site and dealing with it as set out in the EIS will fully protect our position. If this project does not go ahead, our position is that the current dump site should be moved away from Port Granby.

There are no offsetting benefits in the cost-benefit analysis, Mr. Chairman, from the point of view of my group. I am speaking just for my group, not for the community at large. There are no offsetting benefits from the point of view of my group. They are not looking for employment or other benefits as store owners or any of the other things that the Oshawa Trade Council spokesmen mentioned, for example, and in fact they are thoroughly afraid of how this project, when completed, and the increased activity that it will incur, will change their lives.

With respect to international

uranium sales, we have no objections to the production from this project, if it goes ahead, being sold abroad. This has been an issue in which other opinions have been expressed. This, of course, is provided that the Canadian government guidelines and controls are fulfilled. We do feel, however, that a legitimate cost of production is the protection of the local citizens and landowners. Just to give you an example, Mr. Chairman, of the sort of costs that I am thinking about, we had talked about an exclusion area and I don't want to go into that at any more length in terms of what I have already said. Our position is the same, that we can conceive of a second area, a second zone, if you will, beyond the exclusion area we are suggesting, and within that zone, there are people living and working and there is animal life and plant life and we would suggest that it would be and should be a responsibility of Eldorado to look at the special problems that might occur within that area. For instance, health problems arising among people who live there. We feel that special medical attention should be given to the individuals, that they should have more check-ups or whatever because it is necessary to protect

them and we would also get data as to the effect of a refinery and dump site of this type on animal and plant life. When I say the protection of the local citizens and the lives they lead should be a cost of production, that is what I mean. It is not necessary for Eldorado -- I am not suggesting that, for instance, that area be purchased by them or anything else. I am saying this is another alternative, that special care can be taken by Eldorado perhaps in conjunction with government agencies for the people and the way of life that exists within an area designated around the refinery site.

With respect to the streams and the watershed, you know, Mr. Chairman, that the Port Granby Creek and the creek running out of the east of the site, run through the property owned by the individuals I represent. Adequate consideration has not, in our opinion, been given to the potential effect on the two streams running out of the site. The adjacent lands have not been studied by the consultants and must be. Insufficient information has been given concerning the various potential problems. Headwater erosion by the streams should be considered, in that the wastes

could be exposed well before they have decayed an appreciable amount. Additional information concerning the chemistry of the leachate, which is likely to be produced by wastes in various parts of the waste disposal site, has been requested by Ontario, and we would support that. The calculations concerning infiltration through the buried Bentonite cover are obviously subject to different interpretations and we want more information on that, Mr. Chairman.

The EIS speaks of suitably engineered structures to deal with the discharge or potential discharge from these creeks but it does not, in our opinion, sufficiently describe these structures, processes or designs to enable us to determine whether or not they are adequate from our point of view. We need more information, Mr. Chairman.

Eldorado must provide more detail in connection with emergency situations, such as explosions, major spills, et cetera.

Radioactive contamination is a concern that goes beyond the question of surface and groundwater and includes the level of radioactive material in the air and its effect upon human, animal and plant life in the immediate environs. Our group

wants the assurance that the area immediately surrounding the project site will have an acceptable level of radiation, based upon objective international standards. I would submit, Mr. Chairman, that that means taking readings, not just within the project site itself, but out to the exclusion, the boundary of the exclusion zone and beyond that. From a layman's point of view, I cannot -- I must think that those readings would have to be taken at various stages out from the centre in order to get a proper determination of where the line is to be drawn.

As far as zoning and the official plans are concerned, it is our position that this project must comply with all the requirements that a non-Crown Corporation must adhere to. Even though there may be certain exemptions for a Crown Corporation, that is the position we take. The panel should be aware that there is a subdivision of 390 lots immediately to the southeast of the project site. I bring this to your attention because the individuals involved in that subdivision, for whatever reasons, have not seen fit to come here and represent themselves. I don't represent them, but I wanted you to be aware of it. There is a four-piece

plan which I have given to Mr. Warder, which shows the entire subdivision. Just to give you an idea of where it is located, it is on the east side of it (indicating). I have marked it out here. Perhaps I will just pass it out for you. It starts north of the railroad tracks and runs right down to the lake. As I mentioned, there are 390 lots. The eastern creek flows through this development to the lake.

From the records we have been able to locate it would appear that 90 to 100 of these lots have been sold and with approximately 20 lots being built upon located along the Lakeshore Road, running into Port Hope. It is my understanding that those lots are obtaining building permits through the municipality and the OMB. Other lots, interior lots not on the roads have not obtained building permits and, in fact, I should tell you, Mr. Chairman, there is no accepted plan of subdivision. There is what is called an R plan registered, but a plan of subdivision has not been passed through the various processes, but, nevertheless, there are about 90 to 100 of those lots sold and it is the beginning of an urban area and what throughout this area has been described as a rural area. The reason I am bringing it to your attention is that it is a fact that has not come out, either through statements made by Eldorado or anyone else, so I felt you should be aware of that.

Eldorado has not indicated its plans in connection with roads and traffic patterns and other elements of the infrastructure normally required by a project of this kind such as my friends representing the Town of Newcastle have been

discussing. As a result we cannot make anything but a general comment that problems in the areas of noise, dirt, disruption and security will most certainly exist. The whole question of roads and how they will be used is a completely open question and I would submit to you, Mr. Chairman, that it is important not only for the Town of Newcastle, but for all those here interested to know what Eldorado's plans are.

Mr. Chairman, you have our earlier brief and I am not going to go into the points that are mentioned there. I would simply like to make three proposals concerning future hearings and studies concerning this project.

The first proposal concerns the monitoring of water conditions. A program should be devised to test and monitor the soil, groundwater and surface water with respect to the dump site and watersheds flowing out of the site. We would request that these studies be undertaken in the spring of 1978 to permit proper readings taken during the height of the spring runoff which is the period of the year that the greatest waterflow occurs. I have not suggested who should take those tests. I would say it is Eldorado's responsibility.

I would also think it would be beneficial and advisable that the Province and the Federal Environment and Energy Ministries involve themselves in that activity.

With respect to radiation levels we would ask that testing be undertaken at several locations moving out from the centre of the site, out to include the 1,000 meter exclusion area and beyond, in order to determine where the radiation level is acceptable with respect to the general public as opposed to the level acceptable to workers in the plant.

With respect to the timing of Phase II, Mr. Chairman, we would request a period of time sufficient to receive and analyze further information provided by Eldorado, the various government departments and agencies interested in this project, of course, the transcript from Phase I which I believe is fairly lengthy and the additional responses by technical experts to Eldorado's material. We have heard here throughout these hearings that even though people are qualified scientifically to comment they have not had time to comment and we would ask that these individuals be given time

and that we be given time to assess their responses. We recommend that Phase II begin in January of 1978, but request that the panel not submit its report to the Minister until the monitoring and testing that I have already mentioned has been completed in the spring of 1978.

This proposal, Mr. Chairman, I believe is contrary to the advice which you have received from Eldorado. I didn't have the benefit of my friend's comments this morning, but I understand that there was at least a very strong implication that unless the whole timing of this process was accelerated, that Eldorado would consider withdrawing from this process. That is a threat, and I will use the word, Mr. Chairman, that I do not think it is in the best interests of Eldorado because, if Eldorado does not meet the concerns of the public, the people in this audience and you in the long run, or even in the short run, will certainly lose the confidence of the public or they will not gain the confidence that they have never had from the many people here, so it certainly is not in the best interests of Eldorado this process be accelerated. I don't believe it is in the best interests of your panel, Mr. Chairman, or the

Minister of Energy to whom you will report that this process be accelerated if all of the information required to make a balanced decision does not come out and you do not have a chance to consider it. So, I would say to you, Mr. Chairman, yes, let's move this on expeditiously, but let's not accelerate it to the point where you can't make and don't have the time required to make the balanced decision that is necessary.

I must say, Mr. Chairman, that since I am the last intervenor in Phase I, I am speaking not only for my own group, but for all intervenors, that it is certainly not in our interests that this process be accelerated unduly because we are groping, we are groping, Mr. Chairman, but we are starting to learn. We are gradually beginning to understand that we need time to consider, to consider what has been said, to study, to form our views and I would ask that you consider that we are volunteers most of us. The reason I have not been here for all the hearings is very simple. You know, we can't afford that, Mr. Chairman. This is an organization with no money, concerned citizens who are up against one of Canada's largest corporations and I would suggest

to you and your panel that that be taken into consideration when you determine Phase II of this hearing will be called. I would just like to conclude by thanking you and your panel and your staff for the co-operation which you have rendered to us and the assistance that you have given to us in this phase. It is much appreciated.

Thank you.

--- (applause)

THE CHAIRMAN: Thank you, Mr. Laird. Ellan Derow has a question.

DR. DEROW: In your brief you say, "We have formed the opinion that this project will proceed, notwithstanding anything that is said or done at these hearings." I find it very distressing for you to say that and I have two questions: when did you form this Committee, how did you form this Committee and why did you form this Committee?

MR. LAIRD: I knew you were going to ask me that question. I felt I had to put it in because this is what my group has said to me and they have pretty well all been here for a good part of the hearings. They have come up to me and said this is what they feel.

I am just passing that on to you. It is not based on -- if you will pardon the expression, it is a gut reaction. It is just a feeling they have that is not based on any scientific data or anything that has happened in this session particularly. It is just the feeling that they have and I don't want you to, you know, take anything more from that, but that is the way they feel.

THE CHAIRMAN: Any further questions of the panel?

DR. BIRD: Mr. Chairman, I would like to just explore a little bit further with Mr. Laird his second proposal for action on pages 5 and 6 in which he is calling for measurements of the radiation levels out to and including the 1,000 meter exclusion area and beyond. I am a little confused by what you have in mind here. Are you suggesting that you want background levels of radiation as it exists now because you can't determine the exclusion area with respect to what the plant is going to generate by doing the background?

MR. LAIRD: I understand you can't get accurate readings on the plant

before the plant goes in. I understand that. Yes, I think that background readings should be taken now because you, Dr. Bird, have explained to me, among others, that every area has a background reading and I would be very interested to know what the background reading is in Port Granby, particularly because of the existence of the dump site in proximity to Port Hope. Yes, I think that is important. I am not a mathematician or scientist, but I believe there are also techniques which could be employed knowing the scope and the design of the plant which could be useful in determining what the readings would be. I don't want to say any more than that because I am getting out of my area, but that is my understanding.

DR. BIRD: It is the baseline data you are after?

MR. LAIRD: Yes.

MR. CHENG: You mentioned new urban development in the southeast of the project site. I wonder if that has to be included in the assessment.

MR. GRANT: Have we taken into account the existence of that subdivision?

MR. CHENG: Correct.

MR. GRANT: First of all, you can understand when Mr. Laird refers to it as a subdivision it is rather unusual. I think it was actually in what is called checker-boarding. It is not a registered plan of subdivision. Our information is the Township of Hope in which it lies refuses to issue building permits for construction of residences or buildings on the property unless the lots in question in fact front on the Lakeshore Road, so I don't know frankly what percentage of those lots to which Mr. Laird referred would front on the Lakeshore Road,but my understanding is a relatively small number.

With respect to the concern about the statement that the creek runs through the subdivision, I don't think that is technically correct. In fact, the creek runs through a property owned by the same developer. The creek runs and exits on that property considerably down by the lake where it looks from this topographic map that we have here it would be very, very difficult to build. It does not run through the subdivision. It may run through lands owned by the subdivider, I don't know, but it certainly doesn't run through

your area. I think that is the reason the municipality is refusing to issue building permits because of services down there.

MR. CHENG: I just wondered if building permits were issued what kind of effect would that have on your assessment?

MR. CRANE: I don't think, frankly, it would have any effect. These people are on the route which is sometimes taking the residue from Port Hope, but we have Dr. Doug Chambers here from the Environment and if he knows of any specific detailed effect he can tell you.

DR. CHAMBERS: Yes. I am not quite sure what you are interested in. This would be outside the exclusion land shown. I think one aspect that has come up several times and through Mr. Laird would be radiation growth dose calculations. It is our opinion that the first point is the homes are outside the exclusion and they would not be influenced by activities taking place on the Eldorado property.

Again, we could perhaps address this later on. I don't think -- with respect to the planning aspects Mr. Janes later on may be able to reply in that area with respect to air pollution, for example, or radiation hazards.

THE CHAIRMAN: Mr. Laird, would you know if that subdivision is being built on prime agricultural land?

MR. LAIRD: I don't believe it is.

THE CHAIRMAN: Just to clarify for me, I take it it is in the adjoining township?

MR. LAIRD: That is correct, Hope Township.

THE CHAIRMAN: Is there a regional government set up there?

MR. LAIRD: There is no regional government in Northumberland County.

THE CHAIRMAN: Thank you. Any further questions from the panel? Mr. Grant?

MR. GRANT: Just one matter of clarification. Mr. Laird unfortunately wasn't here this morning so he may be excused for perhaps a misunderstanding of what I said with reference to our consideration of withdrawing from this process.

I would like it understood, Mr. Laird, I did not say under any circumstance would we consider withdrawing from the process if the panel did not agree to accelerate any part of its function. I never made such a statement. As you say, it would be foolish for me to do so and just so the record is clear in that regard, that information is clearly wrong. What I did say related to an entirely different matter, relating to the withdrawal of a member of the panel at this last stage, and that is precisely what I said.

THE CHAIRMAN: Do you have any further questions of Mr. Laird?

MR. WILLMS: Mr. Laird, in your opinion would it be fair to say that any suggestion by Eldorado that they could withdraw from these proceedings, and that their participation in the proceedings is strictly voluntary and that they could proceed without the resolution of these proceedings, would any of the suggestions reinforce the feeling of your clients that these proceedings will not have any effect on the outcome as to the disposition of this land?

MR. LAIRD: Well, I think my

clients would just say again that our view is that the project will go ahead.

MR. WILLMS: Thank you.

THE CHAIRMAN: No further questions? Thank you, Mr. Laird. You may be excused.

DON MACPHERSON: I am a local resident if you call within a 15-mile radius local. I have heard more times than enough you express yourself as a layman. Are you in fact a layman or a lawyer?

MR. LAIRD: I am a layman in scientific terms. I am a lawyer.

MR. MACPHERSON: You are a lawyer? A professional layman.

MR. LAIRD: I am not a scientist or a mathematician or an expert in nuclear energy.

MR. MACPHERSON: One more question. I am led to believe that you have already sold land in that vicinity to Eldorado. Am I incorrect in that or correct?

MR. LAIRD: You are incorrect.

MR. MACPHERSON: Thank you.

THE CHAIRMAN: Thank you. If there are no further questions, thank you, Mr. Laird, very much.

I would now like to explain the rest of the proceedings this evening, and my notes have been jotted down rather hastily. I hope I will explain for everyone what is going to happen now and in the next period of time before we get into Phase II. In connection with that, I accept the point of Mr. Laird about the time of meeting is an obvious consideration of the panel. However, we will have to set the dates ourselves.

For the rest of the evening we would like to start off with the panel presenting questions to Eldorado that may be answered now or may be taken to be answered later. These are additional questions, or some that maybe were covered earlier that the panel members individually would like to make sure they are covered.

We would also like, after that, to have questions and statements by others who are here. There are two unallocated speakers who have already indicated -- actually three -- we would like to have them speak and then anyone else who would like to ask questions, hopefully not on

the same issues we have heard or the concerns of the past six days, but if there is anything new, this is the opportunity to bring it up.

Following that, we would turn to Eldorado to begin the process of answering those questions and in a minute I will give the floor to Mr. Grant so he can explain to us this evening and so on. I would just like to say now, in case some of you may leave later, to understand generally what will be happening in the next little while. The panel itself will be meeting the week after next to consider this rather massive amount of information that we have received and will be continuing to receive. At that time we will attempt to identify the deficiencies in the EIS and the issues that should be the subject of our second Phase hearings.

There may well be, and we recognize there may well be a flow of information between ourselves and Eldorado during this Phase in the sense that there may still be other questions that we feel need to be clarified. We will make these available to the public if this comes up.

Now, at this time, since it is hard to predict what the final decisions on these

issues are, we recognize the need to make sure that these are available to the public and interested people will have a chance to comment on them. The exact mechanism that we are going to use, we have not worked out, because we don't know the extent, but what we may do is have an additional one-day session that might allow all of the deficiencies to be presented and quick questions asked, and so on so that people who are interested can find out at least that they have got answers to their questions. We may be able to do this by press announcements, by mail to the individuals and so on. We will make an attempt to keep everyone informed in this. We will also allow time for study of this. It is rather difficult right now to predict how much time. Obviously some time is needed before we proceed to the second phase. Since we do press intervenors to give answers, I think I should, in terms of the second phase, and I will say our very minumum time would be the middle of November. Our later time would be January and I can't qualify January 1 or January 31. It may run into February. That is roughly the time range we are talking about hopefully to get on with Phase II of this.

I hope that that explains in

general terms what we plan to do both this evening and later in this process. Before the panel begins asking you questions, we will allow Mr. Grant to indicate the feelings of he and his people here this evening.

MR. GRANT: I will get to that very shortly. Since this is probably the last occasion that Eldorado, through myself, will have the opportunity of speaking to this group of interested citizens, in view of the probably technical nature of the later sessions, those sessions may not appeal to as broad an audience as these have. I would like to state on behalf of Eldorado, in spite of the considerable degree of distrust and skepticism and lack of credibility which has been voiced concerning Eldorado, that is a kind of reaction which may be caused by emotion or it may be caused by misunderstandings which perhaps rest properly on my client's shoulders for perhaps bad communication or whatever. The fact is that, in spite of what people who seem immutably opposed to my client's endeavours, the fact is Eldorado is interested in this community and is not interested in polluting the environment in Port Granby, or anywhere else, which would be harmful or have harmful impacts on the environment

or create long-lasting bad neighbours. If it were, Eldorado would not have gone to the expense and time-consuming expense of preparing the Environmental Impact Statement and the lengthy indices which preceded that statement, nor would it have gone to the considerable in-depth study, studying everything. You can say what you like about the weight of the study. It is my responsibility to assure each and every member of this audience that their legitimate questions will be carefully considered, but some of the points which they have already raised, have raised already, have been carefully considered by my clients and hopefully we will be able to provide satisfaction to those who are willing to be persuaded by factual evidence, assurance that we will not cause harm to their community, nor harm to themselves, nor generations to come.

The only thing I would like to explain now is our understanding of the immediate next phase of our thing this evening. Dr. Douglas Chambers, who spoke a minute ago, is the officer of MacLaren's responsible for the overall direction of this total project on behalf of Eldorado. Doug

will introduce to you a fair range of sub-consultants or experts in narrow areas of the field in which each is involved and we hope to listen first of all to questions from the panel. Our proposal with respect to that is if the question can be answered this evening, that is, it is of an objective factual nature and we know the answer, the answer will be provided by one or more of the consultants. If a question is not of an objective nature or is more in the nature of matter of opinion, probably following something that was said this afternoon, we would like to give you just our opinion this evening and we will not answer that kind of question. Not this evening, that is.

The second concern we have is questions are not always easily understood. As I said at the beginning of these remarks, we take the legitimate concerns of this audience and the panel very seriously. If our experts do not understand the questions put either by the panel or the audience, we will ask for clarification of the question so that when we come back with the answers in due process, we will not have to deal with misunderstandings on the questions themselves. Without anything further, I would like to introduce

Dr. Doug Chambers from MacLarens.

DR. CHAMBERS: Thank you, Carl. Just to be very brief, I would like to introduce the people from MacLarens. In the front row in the grey suit is Steve Janes, who is responsible for supervising aspects of the study relating to socio-economic considerations and planning. In the back row in the red jacket is Dr. Dave Charlesworth who is responsible for the hydrogeological aspects of the study. Beside him we have Mr. Doug Hodgins. Doug did the work on the hydrogeological aspects of the Environmental Study, site-selection studies. Beside Doug -- I am sorry -- Steve, would you stand up for a second? Steve Janes. Dr. Charlesworth.

(Page 1391 follows)

Next to Doug is Dr. Fred Frye. Fred is a biologist specializing in aquatic biology. Next to Fred is Duncan Cameron, who is a terrestrial biologist and I think that is the MacLaren group except for myself. I am responsible for the air pollution aspects of the report and at least the major portion of the meteorological aspect. In the front row is John Noonan of the Hydrology Consultants. Everybody knows John. Stand up, John. He was responsible for the hydrogeological considerations of waste management which, of course, have already been referred to in the initial stage. I think that is all I have. Oh, I am sorry. John Jerrell, back in the corner. He is with an industrial waste treatment group and he works on water sampling and water quality processes related to environmental factors. Brian Beatty in the back assisted John in the studies related to the waste management proposal. Carl.

MR. GRANT: Now you can see why it cost us a million dollars.

THE CHAIRMAN: Thank you, gentlemen. I think we are going to proceed with the panel's questioning. Mr. Shikaze, are you ready? Are you awake down there?

MR. SHIKAZE: You sort of surprised me. One are the things that came up during the course of the hearings was that Eldorado had made some attempts to lease the property it now owns for the site of the proposed refinery and were not successful in obtaining a lease for agricultural purposes or to ensure that the land was used for agricultural purposes. Suppose this problem persists. Do you anticipate this problem to persist in subsequent years during the construction and after the plant gets into operation? What would you propose to do about it, get in the agricultural business, or what?

MR. GRANT: The first part of your information is wrong. What we did was we advertised the property for lease I think in four parcels and, in fact, we received quite a number of offers through our agents about leasing that land and, in fact, it is now leased and a good part of it is being operated for farm purposes much in the way as it was before the exception of the tobacco area. It is not being used for tobacco. At this point in time we do not -- we have not yet finally decided whether we would operate the farming area ourselves, you know,

when the refinery is completed and the land is available, or we do it through a lessee or how we do it. We still have to make that decision, but we are leasing it now.

THE CHAIRMAN: Reg Lang has a question. I thought I would wake the people up here or mix the people up for a little variety.

MR. LANG: My question is not technical. I would like to try to get a better fix on Eldorado's position on the need for the plant, the refinery, by asking a question: what would you think would be the consequences of not proceeding with this refinery?

MR. GRANT: The consequences of not proceeding with this refinery at this location would probably mean that from an economic or marketing point of view Eldorado would be back like at square one in terms of finding a new location for the refinery and from a timing point of view on the basis of Eldorado's best estimate of the market we would lose a very substantial market advantage over future competition. Eldorado sees what it describes as a hole in the market at a point in time which is within the reasonable time-frame for construction and commencement of operation

of the plant. It is not just a matter of catching the sales for that short period, but a matter of catching long-term customers for a considerable period of time in the future, so the answer to your question is Eldorado would not be able to engage in its view in that profitable part of the market. We would have missed that opportunity.

MR. LANG: If you missed that slot, you still could proceed and build your refinery somewhere else.

MR. GRANT: I am not certain we could do that necessarily in Ontario. We had indicated we were looking for a second site in Saskatchewan, but the time frame out there is quite different.

MR. LANG: One other question. If you did not build the refinery at this site, would you relocate the dump in any case?

MR. GRANT: We don't know that, because that is a matter entirely within the control of the Atomic Energy Control Board and, if the Atomic Energy Control Board, in spite of what someone said about being a captive regulatory agency, if the Atomic Energy Control Board says,

"We want you to move the residue," we are bound to do that. If, on the other hand, they say, "You do something different," and there are other alternatives, then we would have to do that.

THE CHAIRMAN: Peter Bird.

DR. BIRD: Thank you, Mr. Chairman. I think I might just like to say at the outset that through the course of these hearings, both by analyzing the documentation and being stimulated by the discussions which have gone on, I have got quite a number of things that I would like to pursue. It is quite clear that we won't deal with them all tonight, so some of these will end up in the record and be passed along to Eldorado. I will try to select from amongst the ones which I have got here, the aspects that I either don't recall having been dealt with or don't recall having seen and having absorbed in the reading of the documentation. Some of them you may well find they have been dealt with. I have got three that I think are fairly closely related problems, or questions, which I would like to put right at this time.

The first one is in connection with the work force that you expect to have at the

proposed plant. If I recall correctly, when it gets into operation you have about 150. My concern -- my question is: do you expect to provide that work force through new employees of Eldorado or transfers from the Port Hope plant? I suppose the real question is what is the net increase in the Eldorado employee list as a result of opening the new plant?

MR. GRANT: The net increase is 150, but I think Gordon Colbourne could explain this to you in more detail. They might take some from Port Hope and bring them over here until we find somebody else.

MR. COLBOURNE: I think, Dr. Bird, we will probably do a little bit of both. We have identified now specific jobs and we are identifying in the Port Hope refinery specific individuals who will probably take those jobs in the new refinery, but the net increase to the total Eldorado payroll will be 150 people. Some of the new people will go to the Port Hope refinery to replace those who have moved to Port Granby and the remainder of the 150 will begin their career with Eldorado at Port Granby.

DR. BIRD: Have you

1
2 considered the implication if, in fact, the plant
3 were to be located in another part of Ontario?
4 Some of these people would have to be relocated.
5 It wouldn't be a matter of driving from the
6 Port Hope refinery to Port Granby. It would be
7 quite a large move.
8 MR.COLBOURNE: That is
9 correct. We have looked at the problem and it is
10 a real problem. There is no easy solution to
11 it.
12 DR. BIRD: Okay. In
13 the site selection process there is reference --
14 you clearly indicated how you came to the decision
15 of evaluating the relative merits of each of
16 location on environmental grounds and then when
17 it came to the cost estimating it seemed to me
18 that there wasn't enough backup material. I
19 recognize that you may have reasons for not wanting
20 to disclose actual capital costs and actual
21 operating cost figures,but it does seem to me it
22 might be useful to show the differences in the
23 cost both of capital and operating costs between
24 different sites, so one could judge whether, in fact,
25 we are talking about a major difference in capital
cost in the four sites that were analyzed, and the

major difference in operating costs,or whether these were marginal differences, but nevertheless you selected Port Granby.

DR. CHAMBERS: Okay. During the course of Phase I and Phase II, Appendix 1 and Appendix 2 studies, the process was completed in the following way. MacLaren's made preliminary plant layouts showing waterlines, site preparation and this kind of thing. What we tried to do is estimate again on a gross basis because we were not working in detail at that time the site differential costs which were the standard plant with differences and this was with respect to the capital costs. At the same time primarily the transportation people in Eldorado looked at transportation cost analyses and also some other economic studies. Then these were blended in with the environmental and technical factors. I might mention Phase I, that there were layouts in a general sense done for all the prime candidate sites. In the Phase II slightly more detailed plant layouts such as was indicated in the Phase II book, Appendix II, and at that stage of the game we attempted to evaluate a variety of sub-alternatives. I believe, for example, in

Appendix II, if you look at the layout of that Port Granby site you will see one or two or perhaps three alternative routings for water intake and outfall. You are right. Some of the sites were closer on an environmental basis and also on a cost basis. There were cost differences between some of the sites.

DR. BIRD: Were the figures given? I don't recall seeing the figures.

DR. CHAMBERS: The figures were not given in those reports. They were provided in a separate document.

DR. BIRD: I am only talking about the differential, I am not concerned with the absolute figures. I am talking now of differentials. Is there any reason we couldn't see those?

DR. CHAMBERS: I can't answer for the economic analysis. I can see no reason why the differential for the capital cost analysis -- I believe Dr. Foster referred to a report on the differential costs in there. I would ask him to comment on the transportation.

DR. BIRD: It seemed to me you made your economic considerations based

on two aspects, capital and operating costs and came out with a third order for the different sites. All I would like to know is the cost differentials in each location, whether it is capital or operating.

DR. CHAMBERS: We do indicate in the reports the rating of the sites on an environmental and cost basis.

What you are after is actual dollars under each category?

MR. BIRD: The differential dollars.

DR. CHAMBERS: I would have to refer that to Mr. Grant.

MR. GRANT: I was trying to get the answer myself. Would you like to have just the differential on capital cost as well as upgrading cost?

MR. BIRD: Yes.

MR. GRANT: I don't think there is a problem with capital costs on some of these facts. As was mentioned by Dr. Chambers, we do have differences in operating costs for Port Granby, Burwash, Millhaven and Spragge, and also operating cost information as well. I think that should give you sufficient to deal with those. Millhaven was a pretty comparable site. Burwash and Spragge, we mentioned this morning were quite substantially different.

MR. BIRD: You can perhaps see what I am driving at. I want to get some sensitivity for the closeness with which the four sites were in the final selection process measured up so I can make some judgment as to how important

you regarded the intangibles in the final decision you made to go for Port Granby. I have one more question, and then I will relinquish my turn.

MR. GRANT: The four sites you are referring to, the last four including Spragge and Blind River?

DR. BIRD: That would be fine. I would particularly like the last four you ended up with but if you want to include Spragge, as well, fine.

MR. GRANT: Spragge, Blind River, Millhaven and Burwash.

DR. BIRD: That is the stuff we got this morning.

MR. DAKERS: In the summary that was filed by Dr. Foster, it shows Port Granby and Millhaven, which are two of the last three sites. The third site was Burwash, Port Granby, Burwash and Millhaven were three of the four sites indicated in appendix 2. The fourth one was Newtonville with essentially the same capital cost as Millhaven. Since you are talking about similar sites -- the same as Granby, I am sorry. They were almost adjacent sites.

DR. BIRD: That was not

contained in your EIS. It came out through the presentation of Dr. Foster?

MR. DAKERS: Yes. You know, we are in a competitive business and we are not attempting to really say we have announced the cost of this refinery. We announce our operating costs and anybody in this business can very quickly determine what your total product cost is.

DR. BIRD: That is why I am very careful to say I am not asking the absolute figure. I am only asking the differential. I want to know whether you feel it is going to cost you $2000 a day more at Millhaven than it is at Port Granby and $3000 more than at Burwash. That is not going to tell me anything about your actual operating cost.

MR. DAKERS: It is when you tell people you had to hire 150 people at the plant and the difference in the operating cost is primarily labour and the transportation thing, it quickly is determined. Essentially I would think anyone familiar with this business with that information could come up very quickly to a total cost for operating this refinery, and that presents

us with certain problems.

DR. BIRD: If it puts you in that position, I will drop it.

MR. DAKERS: We will attempt to satisfy you as best we can.

DR. BIRD: I have one more question. In relationship to the supplementary information that you gave us with respect to the uranium resources and demand picture that you gave us yesterday, is there any reason why you have lumped all of the North American data as one entry rather than separating Canada and the United States?

MR. DAKERS: Only in that that was the way it was presented at the conference. It was a study undertaken by AECL, Energy, Mines and Resources, and it was presented that way in the World Energy Conference. What I attempted to do and have done previously in the other information I presented to you, I have given the Canadian breakdown of that but I was again attempting to provide information other than that generated by Eldorado.

DR. BIRD: The problem is that the material in this supplementary information

referring to Canada uses the terminology that is not consistent with what is in the tabulations and, therefore, I am not personally close enough to know whether Canada's recoverable uranium resources is the same thing as "reasonably assured resources" and I can therefore take the North American reasonably assured resources and subtract Canada's recoverable uranium resources and know I am dealing with the same thing.

MR. DAKERS: I appreciate that.

DR. BIRD: The same thing applies to the prognosticated resources in one case and estimated additional resources. Do the things mean the same or don't they?

MR. DAKERS: The problem is really -- I think there is a conference going on in Paris right at this moment to try to resolve these differences in calculating particular reserves. Each country uses a slightly different criterion for calculating reserves and perhaps a slightly different price. Of course, if you say there is a certain amount of uranium available at $30 a pound and a certain amount at $60 a pound, that means there is a lower grade at $60 a pound so therefore, there is more available.

It is a heck of a problem to try to sort out. What I tried to do was give you the best information we had available to us.

DR. BIRD: Is it possible to go back to Jammet and ask him, in filing the North American figures, to show Canada and the U.S. separately and disaggregate it that way?

MR. DAKERS: The person I was dealing with was Dick Williams who is at the Paris meeting at the present time. I happen to have a draft cable to have a copy of the report he tabled at the World Energy Conference.

DR. BIRD: If it could be obtained, I would appreciate it.

THE CHAIRMAN: Thank you. Mr. Cheng.

MR. CHENG: I have a couple of questions. The first one is pursuing, which is what happens, should we not go ahead with the uf_6 plan? What I am interested in is what are the implications there would be if this plant is not to be built anywhere at all, rather than on these grounds? What are the implications, what is the situation?

MR. GRANT: I don't think it is our concern in this forum to really get into the overall political issue. We know that the government has said, as a matter of government political policy, that it is desirable for us, which is probably true of all of our natural resources, that we deal with those resources to the fullest extent possible in Canada before exporting. This plant, this refinery would do precisely that. If we say no, then that means 9000 or 10,000 tons, if my recollection is correct, will be processed somewhere other than Canada and the political significance of that is beyond my capability of measuring, but I would assess that to be the problem.

MR. CHENG: So you really can't say?

MR. GRANT: No.

MR. CHENG: The second question which I have is, we talk a lot about cost analyses. I wonder if you have included or considered opportunity costs of alternatives? What I mean is, for instance, in the Port Granby site the acreage of farmland that is given up for the plant and the waste disposal site, what would

that yield in economic terms otherwise over the lifetime when the plant is in use, the present value of that yield?

MR. GRANT: We have actually done a calculation which shows that the amount of farmland or land which would be taken out of substantial farming operation, as I recall, is something of the order of 14 per cent of the entire site would be used for the refinery. If that total area were actually arable land, which I think it probably is, that is a pretty modest amount of acreage. We are renting the farms now, as I mentioned earlier, for very, very modest sums of money, for a 100-acre farm, $30 or $40 per acre.

MR. CHENG: My point is the farmland cost benefit, the unit cost, the benefit of the land which it is put on for so many years, for instance in economic terms over that timespan. I would just like to get a rough idea of what kind of dollars we are dealing with in present value?

MR. GRANT: So I understand that you are saying how many dollars gross income would we derive from operating the acreage as a farm on an annual basis? Gross figure, is that

what you want?

MR. CHENG: Yes.

MR. GRANT: Gross figure, not net.

MR. CHENG: Well, take it this way: I have a plot of land and I can cultivate it this year and expect a return and next year there would be $800,000 and with inflation there would be a bit more. For the lifetime of that piece of land, if it were being used for a different purpose, what would that be, the cost that would be given up?

MR. GRANT: In the lifetime, as stated in the EIS, the life of the plant is 15 years, as I recall, but probably 30 years.

MR. CHENG: The lifetime that you could not use it for another purpose?

MR. GRANT: That is right. So long as we are using it for the refinery and for the decontamination.

MR. CHENG: Well, if it is radioactive I presume you cannot use it thereafter for some substantial time as well, so you would have to consider that time as well.

MR. GRANT: I think I

understand. I would feel more comfortable if some of the people who put those things together answered.

MR. CHENG: Do you know that?

MR. GRANT: I am not sure I do. What you want to know is how many dollars per annum would we derive from the operation of, say, 70 acres, if that is the total acreage, how many dollars per annum would we derive from operating that as a farm, I could tell you that. We can also tell you how many dollars in present-day dollars will be derived from operating that 70 acres as a nuclear refinery, I can tell you that too.

MR.CHENG: The dollars per annum coming from that plot of land ---

MR. GRANT: Gross or net?

MR. CHENG: Take it over the lifetime of that piece of land. It is not going to be used -- it can be considerably longer than 15 to 30 years. If you sum that up using present-day dollars, what are we giving up? Just tell me. I don't presume you have the answer now.

THE CHAIRMAN: Mr. Grant, I think I have a short question. You mentioned government policies a few minutes ago and coming from the Ottawa area I am aware the government has a policy of decentralization which says 4,000 jobs are going to be moved out of Ottawa in the next few years. As a Crown Corporation are you also appearing on the government decentralization policy?

MR. GRANT: I can tell you what we are doing. There are good business reasons to be building a refinery in Ontario, logical and intelligent and if we were a private corporation we certainly would be building in Ontario for all kinds of reasons. From the

political point of view my information is in Saskatchewan the Saskatchewan Government, not the Federal Government, but the Saskatchewan Government has expressed a policy that they would like to see some more work being done on the raw products in Saskatchewan. Nobody in this room, as far as I know, is aware of how significant that fact is or will be in the final determination to build a refinery in Saskatchewan, but the decision to build a refinery in Ontario is not a political decision. It was a decision dictated by economics.

THE CHAIRMAN: Thank you. I think this might be a good time for a break. We have coffee available in the room just behind me. We will take 10 minutes.

--- Recess.

THE CHAIRMAN: Could we reconvene, please, ladies and gentlemen?

Ladies and gentlemen, I neglected to mention one point which I did mention this afternoon and I should have covered again this evening. As you notice, we have seven members

on our panel this evening. This morning in a statement by Mr. Murray Duncan I would like to quickly paraphrase it. The complete statement is available for those who wish it. I am quoting now Murray Duncan:

> "As you are probably aware, I am on the staff of the Atomic Energy Control Board which is a regulatory agency which has the ultimate responsibility for licensing the proposed Eldorado facility."

I am now skipping a bit:

> "My observations over the past two weeks, which have included discussion with members of the public and other panel members have led me to conclude that because of my association with the work of the AECB, my presence as a panel member has inhibited the kind of dialogue between the panel and the public which is so essential to a well-balanced report on the part of this panel."

Skipping a little more:

"I would now like to announce publicly that I have decided to withdraw from the panel in order that...the most objective interchange can occur between all participants which is what we all desire.

I would like to point out that this is my own decision and not one influenced by my management or other agencies.

I will step down immediately and so advise the Executive Chairman of the Environmental Assessment Panel in writing as soon as possible."

As I say, the complete statement is available if anyone wishes it, but that supplies the explanation why there are only seven of us here this evening.

I would like to continue with questioning by the panel of Eldorado and move right now to Ellan Derow.

DR. DEROW: I am suffering from a case of information overload and unfortunately

I think my questions may appear rather shotgun-like. I want to express my appreciation to MOE for making my burden much lighter. I appreciate the deficiencies and the average a great extent, but much of the information -- I feel we will be greatly helped if it is available in response to your briefs.

I guess many of the questions I wanted to ask verbally have to deal with the process you went through to arrive at your conclusions and especially the scientific endeavour with which this was produced as both the process and the product. When they made their oral presentation they discussed this problem and they considered the overall clarity. What I wondered was if you could describe how you were able to bring these various disciplines, these various experts in their different areas of expertise together, how you were able to integrate their decisions, to weight them, because I am not quite sure at this time which sorts of factors have priority.

MR. GRANT: First of all, as you know, we had the benefit of a set of guidelines which had been established by this panel

which consisted of some of you and other persons who are no longer on the panel. As I mentioned today earlier in reply to a suggestion that we didn't follow the formula of the panel, in fact, we did follow the formula of the panel except that we segregated two of these areas which were sort of sub-areas in the guidelines because we thought that those areas deserved separate attention and then what we did, and Dr. Chambers who is responsible for this could respond, what we then did was ---

DR. DEROW: What were the sub-areas?

MR. GRANT: The two areas which we dealt with separately were waste management and what was the other one, Doug?

DR. CHAMBERS: Waste management and community impact.

MR. GRANT: We dealt with them separately although they were called for I think as sub-areas in the guidelines, just in terms of structure. As I said, we had to make this decision in terms of setup. It broke itself down into relatively definable disciplines and Doug Chambers can tell you if you like how

he allocated the responsibility for investigative work in those various disciplines and he can comment on how the fit worked out wherever there was a problem.

DR. DEROW: When you speak of these two sub-areas do you mean the total assessment in the assessment of environmental impact you did not include these two sub-areas in this overall requirement on page 9?

MR. GRANT: No. We didn't except we segregated out the general description in the guidelines, two areas, waste management and community impact, and dealt with them separately. They seemed, according to my information, to logically call for separate attention. Instead of dealing with waste management as a part of this, as a part of that, as a part of that, what appeared to be called for in the guidelines they identified waste management as a significant, if you like, topic in itself and therefore endeavoured to deal with waste management as a topic. Doug could add comments to that because he is the chap who is responsible for that work.

DR. CHAMBERS: Thank you.

First of all, could you clarify whether you are referring to the entire process or to the final Environmental Impact Study?

DR. DEROW: This is one problem I have. It seems you have these different methods of coming to different conclusions and perhaps you could clarify that for me.

DR. CHAMBERS: Okay. This may take a minute or two and it relates to I guess the general history of the project. I believe it was sometime in 1975 when Eldorado Nuclear approached us and asked us if we could assist them in identifying a potentially suitable site for a radium refinery in Ontario. I can't recall the number of sites initially proposed by Eldorado, but my understanding is by Eldorado to a review of principal factors that they needed. They needed a fairly large tract of land, good transportation facilities were essential. They had to transport hydrochloric acid by rail and needed road access. They had a requirement for electrical power.

DR. DEROW: In the initial 14, or whatever it is, I thought it was initially discarded and you didn't look at them because they didn't have hydro?

DR. CHAMBERS: They were not scrapped because they didn't have hydro, not enough and not reliable enough. I will come to that in just a moment. What I am talking about now is how I understand Eldorado arrived at the sites they gave us.

DR. DEROW: Very good.

DR. CHAMBERS: I would like to add -- I can't remember the name of the task force, but a task force spent a considerable period of time visiting various areas of the province, inspecting sites and trying to assess whether or not they were potentially viable sites. They took into account transportation and, as I say, power, water was a requirement, as well. Also, my understanding is -- I stand to be corrected -- they needed railways, for example, in identifying potential locations. During the course of their deliberations sites went from seven to 11 or 14, or whatever figure based on the report. In any case, moving on to the MacLaren study, when we were asked if we would assist in the project we sat down and tried to decide how would you logically go about going to a fairly large number of sites to a more manageable number and finding sites for a

location. We decided what would be appropriate would be what I would call a coarse screening and a fine screening and environmental assessment. Appendix 1, which was in EIS, in fact, reflects the coarse screening process. As the project came in we sat down and tried to decide what we felt, what should be the program. The study team at that time included myself, several biologists and resource economists, planners, people with backgrounds in water quality and hydrology and people I can't remember right now. It was two years ago. In any case, I might have to digress for a moment. MacLaren's set up a sort of specialty division and when a project came in, assigned a project manager and individuals from each of the specialist areas are assigned to this particular project. In effect, that portion of their time is directly devoted to the project under the direction of a project manager who in that case was myself.

During the initial deliberations on Phase I, we said "What parameters can we use to do the coarse screening?" and we decided that the fact of fundamental importance, is it feasible to locate a site in a certain area? If it is not feasible, there is no point in going any further. So, when we got the initial list of sites, we then proceeded to try and find out whether or not these sites were in fact feasible. For example, although you might drive out and look at the sites and the power line is running close to the site, you don't know until you go talk to Ontario Hydro how much power can actually be supplied to certain areas, what the reliability of supply is and, again, you may have to find out how deep the water is and if there is a spawning ground, et cetera.

The first thing we looked at were the technical matters and eliminated several sites on this basis. The next thing we looked at were environmental factors and looked at the remaining sites on what we considered to be environmental grounds. The best of those sites were then subjected to a capital cost and operating cost economic analysis and the sites that survived

that screening process, I believe there were three of them, were pushed on to Phase II. We had two preferred sites at the time. We thought we needed enough sites to have a valid comparison.

DR. DEROW: Dr. Foster told us, and one thing he pointed out was that your firm had done another study, and I have forgotten the exact name of it. Did you in fact use some of this material? I can't understand doing another study for the same sort of thing. We don't have this material.

DR. CHAMBERS: I think I can explain that.

DR. DEROW: Please.

DR. CHAMBERS: Again it is a little rushed because I haven't sat down and read it, but in Phase I I believe amongst the first 14 sites, I think it was 14, there were three sites on the north channel of Lake Huron. My recollection is there was one at Dean Lake, Spanish and I think Thessalon. This time neither of the other two sites on the north channel -- we were not aware of them and nobody had brought them to our attention at that time.

If I can proceed to the Phase II study, I will explain where those sites come in. During the course of the Phase II study, sort of

roughly halfway through, because of the factors that Dr. Foster mentioned yesterday, the Department of Regional Economic Expansion drew to our attention the possibility of a site located in Spragge, Ontario and I believe, again I believe it was either Dr. Foster or the Mayor of Blind River who brought the Blind River site to the attention of our people. The Blind River site -- bear in mind we had already concluded the Phase I report. The Blind River site had an intense examination for a short period of time, if you understand what I mean, and we reported in a brief letter-report to Eldorado, a synopsis of the environmental factors and the differential capital cost to Eldorado of operating the plant.

The Blind River site compared both on environmental grounds and economic grounds not at all well with the sites we had looked at at the Phase II level. A few months later, as I say, DREE had the knowledge and the DREE study came up about Spragge. The report I have in my hand, I don't know whether you have seen it or not, was not done for Eldorado Nuclear, which was why it was not included in here. I will pass this around to the Board. I would like it back.

You can keep it for a while as long as you promise to send it back to me some time. I don't believe I have any extra copies. I will try to find one, if I can find one, and leave it with you. Otherwise, I would suggest you ask Dr. Ian Logan of DREE if he has another copy of the report.

This report, as I say, was not done for Eldorado and therefore it was not felt proper to include it in the Phase II analysis. Again, on both environmental and economic grounds, the site did not compare at all favourably with the site we had selected from the Phase I process for analysis further in Phase II. Perhaps, Mr. Grant, you could pass this over to the panel.

DR. DEROW: What do you ---

DR. CHAMBERS: I am trying to go as quickly as I can. Dr. Bird and Mr. Lang asked questions so I am trying to fill in some of the history as well as I can remember it. On the Phase II study the sites that I recall to be considered were Millhaven, Burwash and Newtonville.

Now, after several months being into the Phase II study, which included several rounds of water quality sampling and biological sampling at the various sites, it was brought to

Eldorado's attention that it may in fact be possible to assemble land at the Port Granby site. There was a land assembly problem, as I understand it, or the possibility of assembly, and precluded it for technical reasons for further consideration at a later stage.

At this point Eldorado asked us if it would be possible to include Port Granby in the environmental evaluations going on at the Phase II level. Our specialists then proceeded to investigate the site and we concluded, because of the close proximity of the two sites, that it would in fact be possible to incorporate Port Granby into the Phase II analysis with no loss of data.

At the end of the Phase II study some of the people on the panel may remember three sites were very close on environmental grounds and one fared not quite so well. However, we did conclude that the final one could be possibly any one of the sites, although two were better than the other one. Taking into account the economic factors and other considerations,and around this time, of course, the concern with the existing waste management site came up and I would rather talk

about the development of the Port Granby plant.

It was decided, I think in everybody's opinion, the preferred site for the location ---

MR. SHIKAZE: Just a short question, doctor. With respect to the criteria or the valuation of the system, in evaluating the four sites in the Phase II study, would you agree that it is a rather subjective type of a mechanism to use?

DR. CHAMBERS: Any scoring system is subjective. This has been discussed before. Steve is more familiar with this than I am.

MR. SHIKAZE: You would agree it is rather subjective and there have been some questions raised on it. The point I would like to raise is, I would like to ask the cooperation of both the Minister of the Environment and also the federal Department of Fisheries and the Environment for their ideas and their subjective input to a scoring type of system for the benefit of the panel. I think they could do that in writing. I hope that we might get that from them.

MR. GRANT: One more thing I would like to comment on and I think it is important to do so, since I mentioned it at the

beginning of the hearing. I hope you are not under the understanding that what we are asking this panel to do is make that preliminary assessment for us because you don't want to get into the area, as you said. These are judgmental factors which, in my view, are not really relevant to substitute your judgment on the various options for somebody else's. We are dealing with these alternate sites because we did the development, certainly historically, but we are not prepared to have the in-depth data to defend our decision with respect to each site which was considered.

MR. SHIKAZE: I would agree with you they are subjective, but I think the panel has to be satisfied that the proper criteria were used and that the subjective decisions that were made are to our satisfaction too. We could perhaps agree to it, or we understand it, and what I am asking for is sort of what the subjective position is with respect to the environmental issues. It may be as feasible an agreement as yours.

MR. GRANT: That is where we differ. I think that really is what we were asked to do. We will provide you with information

making it clear that we really don't think we were asking you to look at the reasons why we selected four sites and 12 sites. What we are asking you to do is look at this site. Okay?

DR. DEROW: Did you just say that Port Granby had originally been deleted or not considered because of technical factors?

DR. CHAMBERS: It is my understanding that Eldorado had considered sites all over the province and one of the factors that we fundamentally had at this site was the possibility of obtaining land and, of course, in this area they received assistance from railways and whatnot. It might be possible because of the fact there was a big parcel of land. I might be confusing the two areas now. They were interested -- this is just after the Toronto dump site ---

DR. DEROW: I don't think that is what you said originally. I thought you said suddenly you rejected it earlier because of technical factors and now you put it in. Is that what you are saying?

MR. GRANT: I think you should have more of the background. The technical factors to which he referred, and at the time

which was a technical problem, did not appear to Eldorado to be possible to assemble a sufficiently large piece of land in the area of Port Granby. The technical factor is you need a piece of land of X-100 acres, say 600 acres or 700 acres. The first hurdle you have to jump over is is it possible to acquire a piece of land of that magnitude? At this point in time Eldorado's only interest in the Port Granby area was the 27-acre site, so that was the technical basis it was rejected on and it subsequently became possible to make that acquisition.

DR. CHAMBERS: In any case, we then proceeded with what we called Phase II of the study on the Port Granby site and I won't go into that unless you ask me some specific questions.

DR. DEROW: I have a few specific questions. In the Environmental Impact Study it says they want you to draw conclusions as to the impact at the end and, also you have noted that you used data that you used in other studies to compute some of the background information

here?

DR. CHAMBERS: Yes.

DR. DEROW: Would you discuss how you did that and the differences between your use for other facilities and your use in this document of this data?

DR. CHAMBERS: I believe the specific references you are referring to are the studies we did for Ontario Hydro in Wesleyville and Darlington. I would like to refer that to Mr. Janes, if he can answer it?

Mr. Janes was responsible for that study.

MR. JANES: I am not so sure I understand the question.

DR. DEROW: It seems to me there is differential in the impact and the kinds of background data which would probably have to be adjusted somewhat if they were collected for another sort of facility and I am very interested as to how you calculated the differential impact. What I hear is there are different criteria involved and if you collected this data for other facilities, how did you alter it?

MR.JANES: It wasn't done for all 14 sites. You are talking now about the four ---

DR. DEROW: I am talking only about Port Granby.

MR. JANES: I believe the information collected for Wesleyville and Darlington was on a regional scale and included demographic information across more than that area. When you say how do we refine that, the flow pattern across that area and the distribution plus the populations in the area and the working force in the area. I don't find a problem in saying we

could take the worker force characteristics of ENL station and plot it against that area having at that time an assumption that Darlington was not going to exist because of postponements and, secondly, the Wesleyville station would be phased at a slightly different period of time.

DR. DEROW: I agree with you, but what I am particularly interested in is how did you calculate surgistics?

MR. JANES: Would you define surgistics?

DR. DEROW: It is not in the guidelines. I would like your definition of surgistics.

MR. JANES: I am going to find myself in the same problem as Doug Chambers trying to give you a simple answer which is going to take a long time.

DR. DEROW: Perhaps you could start on a very simple brief overview for especially the people who are here tonight and you could supply the rest to the panel in writing.

MR. JANES: I think that would be the simplest thing.

DR. DEROW: I think the people here are very concerned about this.

MR. JANES: What we attempted to do with the Wesleyville information first of all, there were studies done in Lennox and Pickering to determine the characteristics of the worker force that moved into that type of facility. We were interested at that point in time to determine the number who moved in, the number who bring with them their families, the characteristics of that type of labour force and its people, building a labour force. We then used that background information, plus information brought to us from ENL on the characteristics of their labour force and in the documents it was a phased period over a number of years which on many occasions we had the construction labour force moving to construction through co-operation and that was in the document. What we did was we looked at the distribution that had occurred in those other facilities and we said that this distribution appeared reasonable for the ENL station. Then we distributed that across the area to find out what relocating in different kinds of communities, in numerical terms only,

we did not go back into those communities to try and determine a community of 40 or 50 people, but the social impact of adding five more people to the community.

DR. DEROW: Could you give a rationale? For what reason didn't you go in and assess the effect on the community?

MR. JANES: I think the first thing you have to understand is that in the area we are talking about, and that is Durham and Northumberland, we are not in a static situation. Even without the ENL station, without the Wesleyville and Darlington people there are things people have agreed upon already and all we are looking at here is the magnitude of growth in terms of its impact on the community services. I am certainly aware of the problems that you are facing which is what do you do with an aging agricultural society and moving a new work force into the area. We did not look at that.

DR. DEROW: I was also more concerned, as well, with the cumulative effect and how you assessed that.

MR. JANES: The cumulative

effect, you are talking now about adding Wesleyville to Eldorado,is that your point?

DR. DEROW: The other people, too.

MR.JANES: The Northumberland Task Force and the Durham Region had developed Official Plan programs to foresee a growth program to the year 2000-plus. We don't know how that growth will be achieved and frankly neither does the province at this time, but we do know that there are three pieces of the growth already established and you can add Darlington to it, so I can't answer your broad question. I am speaking now to Wesleyville and the ENL station. If you look at the worker profile, the profile worker force, in this submission you can plot this over time and you actually have one kind of labour phasing out and being replaced by another type of labour. In your transition you cross the lines of your operations, so just answering your first question now I can't do it tonight. It is going to take time because we have new input that says some of those labour force figures, because of Wesleyville's adjustments, may have to change.

DR. DEROW: Are you going to change them?

MR. JANES: Yes.

DR. DEROW: Thank you.

THE CHAIRMAN: Our next questioner will be David Scott and before he starts, the public here have been very patient. I would propose after Scott's round of questions to ask our three unallocated speakers to make their brief presentations and those are John Yates, Carl Rose and John Willms. Then I believe the panel have a few more questions and then we would ask the public if they have more questions and then Eldorado is going to answer all the other questions.

MR. SCOTT: I want to preface the comments and questions I have now by saying I do not expect Eldorado to answer these tonight because these are technical. Because of the lack of typewriters my questions are in my handwriting which nobody can read but me and sometimes not me. I am fascinated by the statements on page 3-11 of the EIS which has to do with internal recycling and extraction treatment. It says:

Great quantities of uranium can however be effective . . . plant water down the airstream. One hundred per cent recovery of uranium is not economically feasible. The use of internal recycling (inaudible) 100 per cent recovery."

One of the things that we have heard an awful lot about in the last week is disposal of solid waste from the refining process. Now, I would like to be corrected in writing before Phase II if I am wrong on the basic supposition on this. I don't have time to get into an argument, but I would like to get these questions onto the record now because the questions may take considerable time to answer. The first thing is that, as Dr. Anderson pointed out last night, some 3.8 curies of radium per annum going out of the refinery or proposed to go out of the refinery to the disposal site, 3.8 tons, the paper says 3.3, you can calculate from Table 3, .12 and it comes up at 4.2 curies per year. I think there is enough difference there to be significant. As I understand

from that, if you look at that as an output and input from the yellowcake that has been admitted to be of variable quality and probably variable contamination, I think we can say that the vast majority of the contaminant is coming from the extraction process. Now, we have also heard an awful lot said by intervenors and other people about nuclear garbage in relation to the plant. Nuclear garbage in this particular case is what was actually said. I wonder ---

MR. GRANT: Do you mean Radon 226 or Radium 226?

MR. SCOTT: Radium 226. The proposal was made and questions back and forth as to why shouldn't we send the garbage out of the country and get the yellow cake, Federal Government policy is we should keep the yellow cake here. It would seem to me the vast majority of Radium 226 is not essentially generated from uranium in that yellow cake as it arrives or sifts past the refinery. It is coming right from the mills themselves and I am just wondering, and in view of the comment about technical and economical feasibility and the description of the process, the overall refining process, I

have four questions. The first question is: would the transfer of solvent extraction processes in whole or in part to the mills result in a significant reduction in Radium 226 ravelling from the refinery? I assume, since it is a series process, that you transfer only the first phase of solvent from the extraction through the mill, assuming then that they could dispose of the contaminated ravelling from that to their tailings. The possible radioactivity of tailings and the present protocol are approximately the same. That is the first question.

The second question: would the secular balance of Radium 226 in the feedstock at the mills build lastum during storage to make such transfer, in other words, if the yellow cake sits there, having gone through the solvent extraction process at the mill, then comes down to Eldorado or even to the market and sits there for five years, have you lost the little advantage you gained from the cleanup at the mill?

The third question: I think it is generally recognized that in any kind of the process the more uniform the feedstock, the

better efficiency you can get out of it and I am talking about efficiency now, not only in terms of percentage of the product that you input-output balance, but also in terms of cost. With the increased purity of feedstock would it lead to increased efficiency of refinery operation?

Finally, taking these into consideration, if they were technically feasible and perhaps economically feasible, assuming at this point in time some balances could be made economically between the mining proposition and Eldorado's operations, would it or would it not allay a considerable amount of fears of the ecological impact of such a refinery in this area? I repeat, I do not want the answers to the questions tonight because I think these are questions that require a lot of consideration, not only on Eldorado's part, but on any of the technical people who are in the audience EFE and the Ontario Ministry of the Environment. They are to me as much of a summary as I can derive from the general worries of some of the population.

THE CHAIRMAN: Thank you.

MR. DAKERS: Could I just ask Dr. Scott regarding the questions, are you aware of the PNC process, the Japanese process to separate -- this is from the milling process?

DR. SCOTT: I was not aware of that, but what I am concerned with in this particular case is not whether the Japanese can do it, but in terms of whether you can do it.

MR. DAKERS: I was wondering if this is what you based some of your questions on?

DR. SCOTT: I based it on the concerns, the fact that the radium contamination seems to be coming into you. You are not generating it. It is not being derived from the secular composition of your yellowcake. It is already there when it leaves the mill. In other words, you are being required to handle stuff which in my opinion might be better left at the mill. The technical question for you is, is this feasible? This is something that I did not look at.

MR. DAKERS: Do you want to discuss just in relationship to Ontario mills?

DR. SCOTT: Ontario mills at this point in time.

MR. DAKERS: It is a different proposition if you are discussing ---

DR. SCOTT: Quite so. That is what I leave to you to provide. I do not want to know anything about the proprietary part of your process.

MR. GRANT: Dr. Scott, I don't understand the first thing about the first

three questions. I think I understand the last question. I just want to be sure. I want to be sure before we really answer it. If I understand the last question correctly, basically what you are saying is, if we took out the radium 226 at the mine rather than at the refinery, would this be a social concern about waste? I don't know how we could answer that question, as much as I would like to. I think I could answer it here right now by saying, those people who are concerned only with radium 226 obviously -- do you expect us to conduct an attitudinal survey on that question?

DR. SCOTT: No, I don't expect you to conduct that, but I expect you, if such a thing were possible technically, I think (inaudible).

MR. GRANT: That would be nice for a change.

THE CHAIRMAN: Perhaps for a change of pace we might have Mr. Willms' brief statement and then Mr. Carl Rose and Mr. Roger Yates. I was sort of hoping you would use the centre mike. It might not take quite so long.

MR. WILLMS: Mr. Chairman, I think this will be very brief. There were a

number of questions raised of me following my brief this afternoon relating to the position taken by the Town of Newcastle respecting the Darlington Nuclear Generating Station. I ducked those questions in view of the fact that it is a difficult and time-consuming question and time was running very short. However, I understand that that is a matter of some concern both to the public and the panel and perhaps I could outline just very briefly some of the differences that Council of the Town of Newcastle perceive between the Darlington situation and the Eldorado situation.

Number one, the Darlington Hydro Generating Station is producing electricity for the Province of Ontario.

Number two, the Darlington Nuclear Generating Station commenced site selection and planning in 1966. The site was purchased in 1969, I believe. By 1975 or 1976 the basic design processes for the station were complete and we understand that Ontario Hydro was very much relying on being able to construct that station to meet their projected energy requirements.

The Environmental Assessment Act,

which deals with the whole question of need and alternatives was proclaimed in the fall of 1976 and therefore, in the view of Ontario Hydro, and I think it is fair to say in view -- at least in hindsight -- in view of the Ministry of the Environment of the province, the Environmental Assessment Act was not really applicable to the Darlington situation. To the contrary, here we are faced with an Environmental Assessment process and we are participating in the process.

The third distinction is this: in both cases we have been provided with an Environmental Impact Statement. Neither of these impact statements were acceptable to the Newcastle Council and I thought I made that very clear this afternoon, that the impact statements for Darlington were not acceptable to the Council either. The impact statement for Darlington was prepared in two lumps, so to speak. The technical environmental data was prepared by Ontario Hydro itself. The community impact and social impact and financial data were prepared by an outside firm of consultants. We spent considerable time and energy reviewing those statements.As best as we could determine Hydro's technical data was by and large good, except

for some serious concerns regarding the cooling water process. The Town of Newcastle is now participating with Ontario Hydro and the Ministry of the Environment in the designing of the cooling water process.

With respect to the community impact statement, we were not as happy, but we decided to attempt to deal with the impacts on the community by negotiations with Ontario Hydro - at least in the first instance, rather than by an adversary hearing type of process. As it turned out, we were successful in negotiating a rather complex agreement with Ontario Hydro wherein Ontario Hydro agreed to compensate the municipality for all adverse financial impacts that would be compensated by the municipality -- that would be experienced by the municipality as a result of the construction and operation of the Darlington Generating Station.

Consequently, the Town felt that, from its point of view, an Environmental Assessment Hearing was not necessary. But I think I really must clear the air on one other point. It certainly was not the Town's decision not to have the Environmental Assessment Hearing. It would not have

been within the Town's jurisdiction to make such a decision in any event, and that decision was properly made by the Ministry of the Environment and the Cabinet.

I really don't want to belabour that point any further. I could go on probably for several hours about the process we have submitted. We think the process we went through with Ontario Hydro was both unique and successful. We submitted a brief to the Porter Commission on the process and they are certainly very interested and they are, in fact, having us back at least once more to talk about it some more, so it is certainly not fair to say that Newcastle let Darlington slip through its fingers, in a sense, and is unfairly focusing its energies and criticisms totally on the Eldorado proposal.

Thank you, Mr. Chairman.

THE CHAIRMAN: Thank you, Mr. Willms. I take it as a clarification and I don't think we need to assess it in detail at that time.

MR. WILLMS: I appreciate that.

THE CHAIRMAN: Our next speaker

is Mr. Roger Yates.

MR. VELDHUIS: Mr. Chairman, I have a question for Mr. Willms. Please tell me if I am right or wrong, Mr. Willms, but did Don Edison, one of the officers of Ontario Hydro at the meeting last spring, outline the Newcastle and Ontario Hydro decision, did he not say that the Darlington plant was held in abeyance for the Environmental Assessment Act and it was neither excluded nor included?

MR. GRANT: Mr. Chairman, I don't mean to be rude, but you have ruled there were to be no questions. Mr. Willms was clarifying matters that were raised this afternoon at the hearing. I don't want to sit here -- we have all got many, many things to do this evening.

MR. WILLMS: I agree with Mr. Grant.

THE CHAIRMAN: Fine. Thank you, both of you. Mr. Yates.

MR. ROGER YATES: Mr. Chairman, members of the panel, ladies and gentlemen, my name is Roger Yates. I am a resident of Newcastle Village, a Consulting Engineer, former Chairman of

the Newcastle Planning Board and, I might say, I am not emotionally nor finacially involved in the Port Granby-Eldorado nuclear project. I have one comment I would like to make, only one, and I will be brief and I hope objective.

I am not going to speak for or against the refinery. I am not technically sufficiently involved to do so in a responsible way. I do have a comment, however, which I think is of fundamental importance for this panel to address, and that is, that the experts do not, and I repeat "not", agree on the safety of long-term radioactive material storage. This is not merely a local controvrsy but a controversy across North America, and in other parts of the world.

I do not have a copy and I have not read the voluminous EIS. I might not understand it if I had. However, it is obvious that the experts do not agree. I could refer the panel I think unnecessarily to the technical documents picked up at these hearings, the "Technical Review" prepared by the federal Department of Fisheries and Environment, the Province of Ontario "review" dated September 1977, to comments by individual staff members of the federal Department of Energy,

Mines and Resources, and to the briefs of people such as Dr. D. Andres of the University of Toronto.

I think the union representative last night said something to the effect that living beside a uranium refinery is 100 per cent safer than watching coloured television.

If that is correct, Mr. Chairman, I think a lot of people in Port Granby and other parts of North America would be very happy. It would be presumptuous for me to profess competence to debate these issues. However, when experts cannot agree on the safety of a radioactive dump or storage, then I must be concerned. I strongly suggest the panel has two choices to consider: firstly, the possibility of storing the waste material in the precambrian shield -- that is not near Ottawa -- if all the experts agree that this is acceptable, or, secondly, delaying the project for a sufficient number of years until the waste disposal problem can be resolved to the satisfaction of all scientists and experts. I do not think that this panel can responsibly condone the Eldorado nuclear waste disposal proposal unless there is a complete consensus on its long-term safety. I definitely feel that the only responsible decision this panel can take is to find a solution acceptable to all experts.

Thank you.

THE CHAIRMAN: Thank you, Mr. Yates. You touched on an item which will no doubt be covered in our second phase and we would

hope to have as many experts as we can here and maybe we will put them all in the same room. We want to get something out of them.

Mr. Carl Rose.

MR. ROSE: Thank you, Mr. Chairman. I hope this will be brief. It started out as a question and I very quickly realized it would be a rather long question for Eldorado. I initially was going to apologize for emphasizing a point that has been already made, but I decided that I won't because I believe that what I am about to talk about is the prime and central issue in this case, that is, the loss of agricultural land. I also have some additional statistics to offer that I don't think have been brought forward before.

Even though the amount of land is a modest amount, the principle and the examples set for the preceding priorities of our government must be of paramount importance. As far back as 1972-73 and probably before that, at that time the Man and Resources Program brought to the attention of the Minister of the Environment and Minister of Agriculture for Ontario the critical decline in prime agricultural land in Ontario and

it has been public knowledge for many years. People have been talking about it for years and years and nothing seems to be done about it. It has been mentioned numerous times in the Ontario Legislature in the last few years. I grew up in Port Hope and I always took agriculture for granted in the 1950's, but since 1965 I have lived in Thunder Bay where our best land is Class 3 with a much shorter growing season than you have here and we have trouble trying to preserve that. In those 12 years the loss of good agricultural land in Southern Ontario has been so obvious that one must be blind not to see it. Still, after all these years, only lip service is being given to the problem. No obvious solution appears on the horizon. Here is a prime opportunity to reverse this trend or at least not to aggravate it. For curiosity I looked up some figures. According to the Canada Year Book for 1974, in 1971 only seven per cent of the total land area of Ontario was used for agriculture and only a small portion of that is probably Class 1, but I couldn't find that information. Only five per cent was improved agricultural land. Incidentally, this was a decrease

of approximately 10 per cent from 1966, only five years earlier, and no doubt the decrease has continued from 1971 to the present, probably exponentially.

At the same time Ontario changed from having almost equal importation and exports of foods in 1972 -- this is according to the Ontario statistics of 1975 -- to being a net importer of food only two years later in 1974. Eight hundred and seventy-one million dollars imports versus $606-million exports. Again, this trend has probably continued since that time. Concurrently Ontario, particularly Southern Ontario, has one of the fastest growing populations in Canada. On Tuesday night we heard vegetable grower from Port Granby say that her land is frost free at certain times of the year when only two miles further north it is not. This obviously means that it is even more valuable than regular Class 1 land. In view of all these facts it is incomprehensible and foolhardy that a Crown Corporation, presumably having the best interests of the Canadian public at heart, could be so insensitive to the needs, importance and future of agricultural land in Southern Ontario that they could be that insensitive.

Port Granby, with the possible exception of Millhaven and Burwash, is probably the only Class 1 agricultural land. Certainly it is the only one with the added benefit of a moderate climate and it is probably the only one in the whole 14 sites and yet Eldorado is prepared to sacrifice this invaluable land because of other factors which are more easily numerically evaluated than is the incalculable future value of priceless farmland in a world of exponentially-increasing population and exponentially-decreasing prime farmland. We have 93 per cent of the province that is not farmland, let alone Class 1 farmland. Surely there must be some place out there that is more acceptable.

In case one might try to refute my argument by saying it doesn't matter whether Ontario must import food when we can buy it with money made from uranium sales, consider for a minute that in order for us to buy a commodity someone else must sell it to us. Who is that going to be? Canada, the U.S. and Australia are the only countries in the world at the present time that are net exporters of food and no doubt with the exponential increase in world population

and the decrease and loss in farmland occurring in the U.S. and Australia, no doubt as much as in Canada, this situation will not exist much longer. When the total world supply of food fails to meet the demand,we will be left with uranium to eat. Surely there must be a more appropriate site in the 93 per cent of non-agricultural land in Ontario than Port Granby for this refinery if, in fact, it is needed at all.

Thank you.

THE CHAIRMAN: Thank you, Mr. Rose.

Mr. Grant, that seems to have been a complete brief. Perhaps we could go to any questions to clarify.

MR. GRANT: I liked the way the gentleman said it was going to be a question and I just happen to have an answer for it. I think it is appropriate because I suspect it will answer some of the other questions on agriculture, as well. I have it with me and also the supporting information. Just dealing with this statement briefly that the property is Class 1 agricultural land, I think it should be understood that while it may be shown

as Class 1 agricultural land on the Canada Land Inventory, that inventory was prepared on a very broad brush regional basis without specific regard for the individual features or characteristics of an individual piece of land. In 1975 our predecessor bought a little over 200, 220 or so acres, and had a specific site study done for him by an outfit called Ecological Services Planning. That report I could get and make available to the panel, although I don't have it with me in its entirety. The soil capability of that 225 acres of land, the finding of the study was there was no Class 1 land in the 225 acres. The land included Class 2 and Class 3 lands and there were unsuitable areas ranging from Class 4 to Class 7. We on our behalf have endeavoured or at least -- Duncan is here and can comment on how it was done -- we have extrapolated from that 200 approximately acres of land to determine the approximate arability of the remaining portion of the holdings and there is a plan attached to this which showed what that extrapolation would indicate. The extrapolation was made on the premise of, or if the 1975 information is characteristic of the land determined by the site's specific study and if we look at what

portion of the balance of the land was, in fact, being used in 1975 or 1976 for similar agricultural purposes and we plotted that land on our plan, that it was not an unreasonable assumption to assume that the remainder of the land has basically the same characteristics as the 225 acres. We would like to put to rest specifically the suggestion that all, or as it now develops, virtually any part of the six hundred and some acres is, in fact, Class 1 agricultural land within the meaning of the Canada Land Inventory. If you have specific questions on this particular issue we have Duncan here who prepared this material and he can deal with those questions. I will file a copy of this with the panel.

THE CHAIRMAN: Thank you, Mr. Grant.

MR. ROSE: Could I respond briefly, Mr. Chairman?

THE CHAIRMAN: Yes.

MR. ROSE: I was going on information that I think I got from this extract, but I may not have. Somewhere in all this mass of information I believe that I read that there were two dairy farms and one tobacco

farm in that area and certainly we have heard from the neighbours about what good land theirs is. Also, I believe I read that in the statement or something like it, it was stated that 80 per cent of the land is Class 1 and about 20 per cent is Class 2.

THE CHAIRMAN: I think maybe we are getting into debate now and perhaps we could do that later. You have your point and Mr. Grant was going to answer something else.

MR. SCOTT: Mr. Grant, please table that information with us.

MR. LANG: Class 1 land is one thing and Class 2 could also be called prime.

MR. GRANT: I realize that. It refers to Class 2 and 3 as "good" agricultural land. There is a difference between Class 1 and the other classes.

DR. DEROW: What is the problem? It seems to me that this sort of information should have been included in the impact study. We are finding all these additional reports not synthesized into your consideration.

Why didn't we know about this a long time ago and why was the cumulative surgistic information not provided to us in the impact study?

MR. GRANT: We do state it is good agricultural land in the impact study. It is only in these areas -- the suggestion has been made that it is Class 1 land. We couldn't very well have said in the Environmental Impact Statement "By the way, it is not Class 1 land".

DR. DEROW: I thought in the guidelines it asked you to document all your supporting information?

MR. GRANT: I don't think so.

DR. DEROW: I believe it does.

MR. GRANT: We would have a room full.

DR. CHAMBERS: May I make a quick comment here? I think it is being rather unfair to have the room full of reference documents. Most of the regional libraries have most of them. We might be able to arrange to answer that, but I could refer you to the Bibliography, sir.

THE CHAIRMAN: Thank you. I think -- thank you, Mr. Rose. The panel has some more questions, then I would refer to Mr. Cheng.

MR. CHENG: Mr. Chairman,

some specific questions. I think most of them I would rather prefer to forward to you and, hence, to Eldorado in writing. However, I have one or two matters I would like to mention. One of the advantages, as I understand, of this site is an existing waste disposal site to be integrated with the proposed waste disposal site. I have not in my recollection seen too much in terms of the environmental implications of these conditions of the existing waste disposal site. I have a few questions in my mind which I would like to have clarified with respect to the waste disposal site, such as what are the regional effects of this site, that is, assuming the facility has gone into operation?

One of the major concerns about waste disposal, the new one is erosion and I would like to ask when would you reach the position with the existing waste disposal site, and how would you deal with it at that time? You also have discharges, I understand, and my question is, when would the pollution reach those standards and how would you handle it at the present time?

The other general area I have questions on is generally in the ecological area

and I would rather present that in writing. However, I would just like to ask if the effects of the sinking pool has been considered and that is in the wintertime it goes in the water and the waste stays on the bottom?

DR. CHAMBERS: Can John or somebody deal with the first batch of questions now? If I understood your first question properly, let me just repeat it. You are interested in what the discharges are from the existing waste disposal site, now that it is operating, is that correct?

MR. CHENG: Basically. I don't think it would be fair to pass the time for you to answer all the questions. I would just ask you the last question. Is the phenomenon of the sinking pool considered, the sediment?

DR. CHAMBERS: I think I had better answer the first few questions in writing. I am not sure I understand the third one. The second one, when will the erosion reach the existing waste disposal site and the third one was the ultimate erosion -- I didn't understand the last part.

MR. CHENG: You have two reservoirs holding waste. How long will it be before ---

DR. CHAMBERS: Are you talking about the waters from that lagoon or the dams on the east and west portions?

MR. CHENG: The ones on the flow course.

DR. CHAMBERS: The reservoirs, then?

MR. CHENG: That is right.

THE CHAIRMAN: Reg Lang?

MR. LANG: I have one question. Perhaps I could put to you one thing that puzzles me a bit. In the statement you referred to in sort of a passing way, earthquakes, and said this area was stable and there will be zone 1 which is something -- I have a newspaper in front of me which comes from the executive offices of the president of Emergency Preparedness, report to Congress on disasters, January of 1972, which is a map of the United States and which shows the area on the other side of the lake in zone 3 which says "Major destructive earthquakes may occur". One of the people who was here on the first night last week recalled his own experience, being shook out of bed by an earthquake in Oshawa. I would like to clarify that, whether the two

countries have more than just a parallel line between them?

DR. CHAMBERS: The number was taken from the NRC building codes. We have not contributed to NRC. Dave, do you have any comment on that?

A SPEAKER: Basically, I would agree with what Doug has said. We took out the probability calendar. I would like to see this document and we can probably reply to this question in writing as well.

MR. LANG: I will give it to you later. My question really is on monitoring. It seems to me there are quite a lot of unknowns associated with the operation, particularly the waste monitoring facilities. A lot of these unknowns are taken care of by the notion of monitoring, gathering information at some later time and keeping track of what is going on, taking corrective action if necessary. What concerns me is, who gets the information from the monitoring? In your document dated the 29th of September, you list a whole number of things you would monitor and I believe you said earlier today that you would see this information published and

then you would prefer it to be released through the Ministry of the Environment of Ontario?

MR. GRANT: Yes. In response to one of the conditions I think the Labour Council had suggested they wanted to see -- they would have no objection to it being published. Our concern was it be published by MOE. As I understand at the present time, the present refinery, we provide our monitoring information to the Atomic Energy Control Board and the Ontario Ministry of the Environment and we would be able to do that, is that right?

MR. COLBOURNE: That is right. I will pass it on a little further to Stan Frost. He deals with the director.

MR. FROST: I am running out of guys at the end of the table here. Our monitoring program at the refinery was in cooperation with OME and AECB and we file reports with those agencies on a monthly basis, usually a month in arrears, and we collect samples over a period of a month.

MR. LANG: Do you have any kind of information that would result in the monitoring program that you would not be willing

to release to the public?

MR. FROST: I can't think of anything off-hand.

MR. LANG: I am trying to think now of two situations. First of all, let us say in the event of any unusual or upset conditions, additional monitoring be done to assure corrective action be taken. In case of an accident or upset condition, can you foresee there would be any problem in letting the public know such a condition had occurred?

MR. FROST: What normally happens is it is a requirement of licensing of AECB to file what they call unusual occurrence reports, and you in fact have to notify the AECB -- I am not sure whether there is a time limit -- something like within 24 hours or immediately. Essentially you notify them by phone or Telex and follow up within some stipulated period, something like ten days, or something, with a report in writing. Reports of any serious upset have to be filed with the regulatory agencies.

MR. LANG: Okay. I would I guess like to see a specific description of the way the monitoring system would work and I guess

A CITIZEN: Could we have five minutes to submit a brief?

THE CHAIRMAN: We have had 52 or 55 briefs from the citizens of this area in the last two weeks. If there is time this evening, I would ask for further comments then. I would like to allay the concerns of the panel members and then turn to the public, as I said before.

DR. DEROW: Perhaps we have a different definition, but I was just checking. We were given two volumes of something called "A Public Attitude Survey", prepared by International Surveys Limited. I guess it is like other attitudinal information. I don't know how you are using this supplementary information. You gave it to us. How can we incorporate it into the impact assessment? Can you clarify it for me? Has it been used, is it useful?

MR. GRANT: My information, and I stand to be corrected, as usual, is that that attitudinal survey was prepared in anticipation of a requirement of the panel after the original thing had been filed. As I recall from the survey, the last -- whatever you call it -- the last series of questions were undertaken well after

the filing of the Environmental Impact Statement. In fact, it was appropriate, according to my information.

After the statement had been filed and our other information had been produced. That is my information.

DR. DEROW: Doing an impact assessment and social impact, defined information on social impacts and I wonder how you are going to correlate that with your whole procedure. In other words, you are trying to a certain extent to inform the public as well as allaying fears and I wonder if you would take that into account because it is very hard to use this information.

MR. GRANT: Two aspects, as I understand. It is a requirement and a concern on our part to inform the public of the project. That started some time ago and long before the environmental impact statement was filed. In connection with that we had Gord Colbourne going around trying to explain the project to the public. As a measurement of the attitudinal survey, if you want, our consideration of the relevance of that was really for your benefit that we had a reputable company in this field do an independent survey so we could present to you for your convenience and not for ours, in

terms of designing a plan, that was for your information, the results of the attitudinal survey. That was really what it was for. Not to help us.

DR. DEROW: Thank you. This relates to my last question. As I understand it, and I am not quite sure, everything has been delayed a little bit, this assessment, maybe the next phase of the hearings, and this has an economic impact upon your firm, planning impact, personal impact. I was wondering if you could comment upon what the effects, potential effects of delay are on your company.

MR. GRANT: In a financial sense?

DR. DEROW: Impact sense.

MR. GRANT: What is the difference between impact and financial?

DR. DEROW: Economic impact. Perhaps there are some others that are terribly important.

MR. GRANT: I did discuss already, and perhaps it was not understood. My client from an economic point of view sees the objective as a hole in the market and the construction of this particular refinery was undertaken to a very

large extent so that Eldorado as a business corporation would be in a position to be able to refine radium that it saw would be required during that period. It is very important to understand that if they did that it would not be just a matter of providing the radium required for just say a year, but they would thereby acquire long-term customers with respect to that requirement.

DR. DEROW: I was thinking of a much shorter period of time, for example, Phase II of our hearings, when they will be scheduled. Will this make a big difference to you?

MR. GRANT: It will make a difference in putting this uf_6 out at the end of the line in nineteen-whatever-it-is. It takes so long to build from the construction point of view. As I recall it is about a 30-month construction phase and then there is, of course, the design period and a certain overlap in that direction. We still have to have a number of lengthy discussions with Mr. Willm's client. We will endeavour to start those talks on specific items soon. They are very knowledgeable on it and I am sure the town will want some agreement on our part on some of the areas that Hydro has agreements on.

If you add all these things to our end objective, which is to open in business on December 1, 1980, or whatever it is, we have a problem at the front end and a big one.

THE CHAIRMAN: Thank you. Peter Bird.

DR. BIRD: Thank you, Mr. Chairman. I would just ask one more question if I may, Mr. Grant. In your EIS statement there are frequent references to improved technology as being developed and which will be included in the new plant and produce thereby fewer environmental problems, air and water discharges and what have you. I wondered if it would be possible before the next phase of the hearings for you to identify more specifically kinds of problems which have been identified in your existing operations for which the improved technology is designed to overcome. I am not talking about the proprietary engineering process developments so much as the kind of environmental problems that you have identified in your present operations and then the new technology and the impact of that new technology in reducing those environmental problems. You just treated it in too general a way and I thought I would

ask for more detail, if possible.

MR. GRANT: I am sure there are various little details with this or that widget in this one, but we use our own judgment as to what we consider to be the area of improvement and I don't know how many that would be in number if it helps us clarify the significance.

DR. BIRD: I think if you just give me the significant ones I would be very pleased.

MR. SHIKAZE: Just to follow up on that particular question and the questioning that Reg Lang was pursuing, and some of the responses on behalf of Eldorado, it was noted with respect to spill and upset conditions that reports have to be made to the Atomic Energy Control Board and sometimes to provincial agencies. Do you have any record of this type of information and the kind of incidents that occurred and to what extent was this information used in designing the new plant, or is it being used in designing the new plant to prevent this type of situation occurring?

MR. GRANT: We certainly are sure it was used in the design, but we have the information. We have a record of the upsets

and the answer to that is yes. The second question, as I understand it, is to what extent have we learned from whatever cause of the upsets and used it in the design of future plants, is that right?

MR. SHIKAZE: Yes.

I have a couple of other short questions. Just for my own curiosity how many uf_6 plants are there in North America and the rest of the free world?

MR. DAKERS: There are five in the U.S., six conversion plants in the world, Allied Chemical, which has a reasonably clear field. I am not sure where it is. It is in the U.K., anyhow. The Comrex plant, the Eldorado plant in Port Hope and the Kermigi plant is in the United States. In four of those plants is a process similar to the so-called wet chemical method, uf_6 processing. Similar with modifications to the other process. Allied uses a dry chlorination process, a hydrochloric process. It is a slightly different process in the type of product which it produces and the type of source material that you accept.

MR. SHIKAZE: Thank you.

Perhaps it was mentioned, but is it the company's

intention to continue operations of uf_6 refinery in Port Hope for the same length of time as the new plant?

MR. DAKERS: That is correct, yes.

MR. SHIKAZE: One other question that was not addressed in the EIS I don't think was are there any other products or other plans in conjunction with the new refinery at this point in time? I know it is your intention at this time to product uf_6, but are there any far-reaching or future expectations with other types of production? There was some concern addressed by some of the people in their statements about potential fuel reprocessing. I don't think you are going that route, but I would just like to get that cleared up.

MR. DAKERS: No. Someone asked if it would be suitable for an enrichment plant or fuel reprocessing plant and our answer was we would not expect to go into that.

THE CHAIRMAN: There are two more things we would like to do this evening and one is receive some of the answers by Eldorado and the other is I have another series of questions

from the public. I would like to suggest a short break right now and then perhaps Eldorado can quickly summarize this and we will cover any points brought up by the public. We will take five minutes really this time.

--- Short recess.

THE CHAIRMAN: Could we reconvene, please, ladies and gentlemen?

Mr. Willms, I will put you first on the list for standing up. Ladies and gentlemen, perhaps we can come to order. I would like to give the floor to Mr. Grant for a brief statement on the answers to our earlier questions.

MR. GRANT: I think it was Mrs. Ashby who at an earlier stage of the hearings raised a question about the Welcome Camp-site and we agreed to supply certain information with regard to that site. I have done so now and it is being passed around. We have a few extra copies. It is a single-page document.

More significant, the Mother Nature paper presented by the Federal Department of Health and Welfare which dealt with some 50-odd

and questions/in the larger one which is 23 pages, we have endeavoured to deal seriatim with the various questions raised by the Ministry of Health and we obviously will not have sufficient time here this evening to do it orally with those responses. There are a few extra copies -- I think there were 20 copies. I don't propose, Mr. Chairman, in the interests of saving time, to deal with it in any greater depth. We are still proceeding diligently with the preparation of answers to the Ontario Ministry of the Environment questions and we will have those available to the panel as soon as possible.

THE CHAIRMAN: Thank you, Mr. Grant. I think at this stage if there are no additional questions from the audience I would like to point out we have heard and Eldorado have heard some 55 briefs and I would hope that any questions you want to ask now are different questions. The fact that there is a big pile of experts here might allow you to express items that could come up in the next phase of our hearings, so they are forewarned. John Veldhuis.

MR. VELDHUIS: This is something I haven't done before, but I am going to ask your assistance, not so much with the questions as with the answers I expect to get. I will try to keep my questions brief and I hope the answers will be equally brief.

The first question is, could you explain in brief layman's terms how the pumphouse and the water treatment facility of the pump work? I don't want a chemical breakdown, and this sort of thing, but basically, how does it work?

THE CHAIRMAN: You are talking about the existing Port Granby site?

MR.VELDHUIS: Yes.

MR. DAKERS: The east and west streams exiting from the existing waste management site have been dammed at each end of the stream. Those two streams are pumped -- those reservoirs are pumped up over the waste management area in plastic pipe up to a sedimentation room located north of the existing dump. The water enters the first lagoon which we call a sedimentation lagoon, and the idea is primarily to allow sufficient time, settling time, so the material can allow suspended solids to drop out, sand, soil, that you would expect in the water. The water from that sedimentation lagoon is pumped and this is dependent on the level of that sedimentation. It is pumped through the treatment plant where chemicals are added, where chemicals are added which precipitate the radium and the arsenic, and

that material goes out into the precipitation lagoon, the second one. The overflow from that lagoon is discharged into the circular peripheral drain which then goes down around the waste management site and discharges into Lake Ontario. The material, the solutions, the water is monitored. We monitor the incoming material into the first lagoon and the discharge out of the second lagoon. We take samples and monitor them.

MR. VELDHUIS: I must congratulate you on that very clear answer. It is the first one I am able to recall all the way.

MR. GRANT: One other point here. Around the sort of large end of the dump there is a trench and the purpose of that trench is to divert surface water so surface water no longer passes as it used to pass through.

MR. VELDHUIS: Okay. My next question is, you say it is discharged back into the lake after it has been treated, or after ---

MR. DAKERS: After it has been treated and into the second lagoon.

MR. VELDHUIS: How does it get into the lake? Does it come back into the east or west ---

MR. DAKERS: It goes into a circumferential drain, around and discharges -- the drain is north-south on the existing residue and goes west of the existing residue site, so it is out of the area of the dump itself.

MR. VELDHUIS: Right. I am trying to get a picture of this in my mind. There is a third channel there?

MR. GRANT: Do you remember the slides that Mr. Colbourne showed you? Visualize the location of the dump. There is on the north end of the dump a trench. North of that trench are two lagoons.

MR. VELDHUIS: I understand that.

MR. GRANT: From the second lagoon the water is discharged into the lake by by-passing the dump area itself.

MR. VELDHUIS: I understand that. It is very clear. What I am at now is the lake side of that process. In other words, does it still run across the beach and into the lake, or how does it discharge into the lake?

THE CHAIRMAN: Mr. Veldhuis, this is very interesting. Do you have a point that

you want to make?

MR. VELDHUIS: Yes. I am wondering, you know, we talk about monitoring and I am wondering, you know, it is going into the lake somewhere, at some point or other it is going to be monitored. Obviously, fantastic changes have been made in this pumphouse and I am just wondering is the effect still the same? I want to know, is the water still monitored as it was before at the end of the lake, or is the water discharged in a different spot now, you know, so that we are right on the edge running across the beach, perhaps running into the lake?

THE CHAIRMAN: Your concern is about the monitoring, or how it enters the lake?

MR. VELDHUIS: They are inter-related, you know.

MR. DAKERS: The two streams no longer exist. We have reservoirs. They are dammed up. That water is now pumped up to the treatment plant, as Mr. Grant described, and discharged. It comes around to the north and west of the existing dump and is discharged through a pipe and across the beach to Lake Ontario. The monitoring is done on the top end of the lagoons. Okay?

MR. VELDHUIS: Okay, fine. No actual monitoring is done at the beach as it was before. It is now done at your pumphouse?

MR. DAKERS: In addition to that, we always monitor the lake water off the beach at set intervals. That monitoring still goes on. The OME still monitors in the same area.

MR. VELDHUIS: The other problem is, I understand you have two catch basins where the east gorge and west gorge used to be. We had some unusual weather, I think you would agree, during the month of September. We have had flash floods, a very wet month. What happens? Is there any chance these dykes or retaining walls might wash out?

MR. DAKERS: I believe in August we just completed the two reservoir systems. We had a storm -- I don't know if it was localized in the Port Granby area, but it was covered with water. We considered it a 15-year storm, which means it drops a maximum amount of rainfall, which only occurs something like every 15 years. In that period we had some problems in that we had just attempted to stabilize the banks around the existing

reservoir area with sods. The sods, because of the downpour, did slide down into the reservoir. The reservoirs did not overflow and, in fact, we pumped all the water contained in that storm up to the lagoon system. Up to that time, because prior to that period in the Port Hope or Port Granby area, there was very little rainfall and we were having difficulty getting sufficient water up into our lagoon systems so we could treat it.

We began pumping in July and we didn't have sufficient water until the middle of August before we could treat it. The storm that we received in July or in August effectively gave us enough water so that we could treat it.

MR. VELDHUIS: Just one more on the same. Is there any chance whereby this could occur again? I know it is one in 15 years, but we are talking about a 30-year or longer lifespan. Could it happen again where the catch basins would wash out because of unusual wet conditions?

MR. DAKERS: It wasn't the catch basin that washed out, it was the sod we had attempted to use in stabilizing the upper reaches

of the dam. There was no overflow. There was no breaching of the actual reservoir. You could talk about 50-year storms or 100-year storms. We believe there is sufficient capacity in design to be able to handle such storms.

MR. VELDHUIS: Okay.

MR. LANG: Did you say a 15-year storm or a 50-year storm?

MR. DAKERS: Fifty-year storm.

MR. VELDHUIS: What is the future of this monitoring from the Port Granby site, talking about water of course? Will this be available to the public, and specifically me, if I ask for it?

MR. GRANT: The monitoring we are doing of the water ---

MR. VELDHUIS: From the plant. If I heard you correctly you said things have improved considerably. Okay. I would like to see at some time in the near future some sort of readings. I have old readings that go up to 1975. I do not have present up-to-date readings and I would like to have some sort of comparison. Is that available to me?

MR. GRANT: We are going to file with the panel ---

MR. VELDHUIS: My question is ---

MR. GRANT: ... what we have already agreed to file with the panel, and it is my understanding the panel makes available to the public whatever we give them. As far as the future is concerned, I don't think we have a problem.

MR. DAKERS: I think, Mr. Veldhuis, if that is the correct pronunciation---

MR. VELDHUIS: Close enough.

MR. DAKERS: People in the past have accused the company of cooking the results and the results we were reporting were not accurate. The reason we have chosen to say that we would report these to the OME and the OME will have, presumably, check samples or additional samples so that everybody is assured that the results that are recorded are the correct ones. I think that is an unfortunate situation that the people somehow believe we are not revealing the actual results as taken. I suggest that any results are open to interpretation. When people question the veracity of the reporting ---

MR. VELDHUIS: If future readings could be made available to me, John Q. Public ---

MR. GRANT: We said that. We will give it to the OME and the Atomic Energy Control Board.

MR. VELDHUIS: But not directly. You are in my neighbourhood. You live right next door to me.

THE CHAIRMAN: Gentlemen, I think he said it very clearly.

MR. VELDHUIS: I am sure from the experience we have had so far this evening, the company will not give me a short answer to this, so I am quite pleased to have it received in writing, Mr. Chairman. That is the definition of "environmental factors", because I am very upset. The words "environmental factors" keep coming over. EIS came up tonight and from what I can see from it, their definition and my definition are totally different. At some time or other could I have a one-page sheet of paper with some sort of definition of what we mean by "environmental factors"?

MR. GRANT: The answer to that is no. I will tell you why. We have in the Environmental Impact Statement, which runs to 1100 pages, as you very well know, stated what we consider to be the relevant environmental areas. We don't propose to get into an academic examination of environment or environmental. We have touched all bases and, in fact, those bases which we have not touched, which were mentioned by OME or the federal Environmental people, Health and Welfare, we will deal with in later responses.

THE CHAIRMAN: Mr. Veldhuis, you have had 15 minutes now, in addition to the three presentations you made. One more question.

MR. VELDHUIS: I would like to see this considered as an issue by the panel, the differences in definition because obviously it causes a lot of concern among the people and I am sure among the panel members. The fellow from MacLaren stated the site is agreed upon already. I refer him to something that the mayor of the Town of Newcastle, there has been a hamlet study done and that hamlet study quite clearly indicated that the people of this area wanted infilling in hamlets and villages only, not major developments. I wonder if he has taken that into consideration.

MR. JANES: Yes.

MR. VELDHUIS: How can you say that the Town of Newcastle has agreed upon it already?

A SPEAKER: I would like to ask you -- I want some sort of assurance to get to get that project and get it firmly underway.

MR. GRANT: Some kind of insurance?

MR. DAKERS: Like fire insurance?

A SPEAKER: To get that project firmly underway.

MR. GRANT: You and I had a discussion about insurance and I thought -- are you saying it is a disadvantage we are going to build this? The answer to that is no.

A SPEAKER: If the company -- with respect, that kind of money which would already be otherwise spent knowing not what you are going to get?

MR. GRANT: Probably if you have an Ontario requirement with respect to the environment, those requirements you might not have to meet such stringent processes as we do here. I am not criticizing the process, but it is an example for the information I have seen inthe environmental impact thing on Wesleyville and it is that (indicating).

A SPEAKER: You say, in other words, the company doesn't have that kind of regulation at the present time?

MR. GRANT: I didn't say quite that.

A SPEAKER: In that case what are you trying to explain to the public if they are using more money than they spent already on this program?

MR. GRANT: That is what they said.

MR. HARDY: Lot 206, Plan 173, Port Hope. I live approximately three-quarters of a mile from their present dump site. The gentleman on my right asked the question how long it would be before erosion attacked the dump site. I was down there approximately three weeks ago. I walked up along the fence to take a look at this dam in one corner. I went up about 30 or 40 feet and I couldn't go up anymore because there was a big hollow down there. The old fence is down there. It is probably about 30 feet deep and I had to go way around probably 60 feet to get up high enough to see the dam and the pond.

MR. GRANT: This is on our property?

MR. HARDY: The southeast end. I didn't go on your property. I didn't do the same as the other fellow did.

MR. GRANT: Which area are

you talking about?

MR. HARDY: The southeast end of the lakeshore, right on the lakeshore.

MR. GRANT: The southeast end, as you perhaps know, is in the Township of Hope, the southeast end of the Eldorado property and it is not used for refuse now. The southeast end of the property, owned by Eldorado ---

MR. HARDY: Who put the fence up?

MR. GRANT: The southeast end of the property ---

MR. HARDY: You have fences on it.

MR. GRANT: Here is a plan and perhaps you could show me.

MR. HARDY: I can't show it plainer.

MR. GRANT: There is the southeast end. That is the Township of Hope.

THE CHAIRMAN: Gentlemen, perhaps, Mr. Grant, you could give a quick summary.

MR. GRANT: I am trying to think what he is talking about.

MR. HARDY: And, furthermore,

there are little streams of water running out of your dam.

MR. GRANT: What is your question?

MR. HARDY: I was answering his question. My question is: first of all, I am an electrician. I have taken two or three courses in electricity and never once was a neutron mixed since the splitting of the atom and the neutrons are very important. Any knowledge I got I got out of this book (indicating) and I found it is a book for children. You know, there are lots of times a child can answer a question you can't answer. This book is written by Donald Dark, Assistant Dean, School of Engineering, Cornell University. It is edited under the supervision of Mr. Akins of Washington, D.C. All I want to do is try and draw a picture and it is only going to take a couple of minutes. I don't want you to attack me technically because I am not a technical person on nuclear physics, but it is true that 99 per cent of all uranium mined in the world, whether it is in Canada, the United States, the Congo, Russia, 99 per cent of it contains a heavy isotope 238. Is that right? About 100 of that is uf 235. Okay? Now, 238,

is not rich enough to start a nuclear reaction and your job is to separate the 235 from the 238.

MR. DAKERS: That is not quite correct.

MR. HARDY: That is what was done in the first place, wasn't it?

MR. DAKERS: That is what happens in an enrichment plant.

MR. HARDY: At Oak Ridges?

MR. DAKERS: At Oak Ridges and some European plants.

MR. HARDY: You won't fight with that -- you are separating ---

MR. DAKERS: We are not separating. We are taking natural uranium which contains 99.3 per cent, uf_{238} and going seven per cent, 235, and we process it in that way. That is natural uranium.

MR. HARDY: Do you use uranium hexafluoride?

MR. DAKERS: We don't separate it. We don't separate it in Canada. The separation comes at a later stage. When you take the uf_6 uranium hexafluoride and it is sent to the enrichment plant and the 235 is separated from the 238.

MR. HARDY: I am talking about the first time during the war the United States had a bomb already made, but they couldn't get enough 235 to start the nuclear fission reaction, so Professor Dunning and his Columbia group got the idea -- they had tried several methods before -- Professor Dunning and his Columbia group told them the way to do it was to get a uranium compound that was a gas. That gas was put in a tank, a forced tank with thousands of holes in it ---

THE CHAIRMAN: Excuse me. I appreciate your comments, but I don't think you are talking about the same process.

MR. HARDY: I am finished right now.

THE CHAIRMAN: Thank you.

MR. HARDY: But they still needed this 235 and this is the point that I want to bring up. For a long time before Japan ended the war and Germany was working on an atomic bomb and for a long time the American Government held back. Then it told Professor Dunning to go ahead and design the plant in an out-of-the-way place, an out-of-the-way place in Tennessee, a place called Oak Ridges. Anybody who goes through the

United States to Florida knows you wouldn't have to go very far to get to an out-of-the-way place. I like the concern the American Government had for its own people. Why can't you find that same concern here? This question, do you think that Port Granby is an out-of-the-way place?

MR. DAKERS: The reason Oak Ridges was chosen as an out-of-the-way place is it had a military demand for uranium.

MR. HARDY: They held off for a long time ---

THE CHAIRMAN: Would you let Mr. Dakers reply?

MR. DAKERS: It was so situated that they had sufficient electrical power to do a 235-238 separation.

MR. HARDY: Why did they hold back so long?

THE CHAIRMAN: I don't think that is a question that is too relevant to Eldorado's current operations.

MR. HARDY: They were concerned with their own people and when you go sticking your head in Lake Ontario you haven't got

any concern. I think regardless of what is said here this is going to be shoved down our throats, whether we want it or not.

THE CHAIRMAN: Mr. Hardy, I think you have made your point. I appreciate your making it. I think we should pass to the next speaker. I see Mrs. Lawson ---

MR. HARDY: I have one more question. What is done with the the U-238 after?

MR. DAKERS: The U-238 after the passing through the diffusion plant, the enriched uranium portion 235 is somewhere between two and three per cent. That is the enriched fuel that is used in American light water reactors and also some types of reactors in Japan. They are not used in Canada.

MR. HARDY: What is done with them?

MR. DAKERS: The so-called completed uranium is stored and reduced to a uf_4. The reason for this it is potentially useful as a fuel in the future. Some 99 per cent of the power available is at the present time not being used. We are losing approximately one per cent

of the uranium as a power source.

MR. HARDY: Has anyone ever gone to the plant and seen the dumping process? What is it, is it wet or is it dry, do you cover it with earth, or is there just a big hole where you dump the residue in?

MR. DAKERS: The residue is taken out in trucks and put in a continual hole.

MR. HARDY: Is it dry or is it wet?

MR. DAKERS: The present material is wet, damp.

MR. HARDY: It is not covered with earth?

MR. DAKERS: It is covered with earth.

MR. HARDY: Like a landfill site?

MR. DAKERS: Like a landfill site, the existing residue. That is not what we propose to do at the new refinery and that is not what we propose to do at the Port Hope refinery.

MR. HARDY: Thank you very much.

THE CHAIRMAN: In view of the lateness of the hour I would like to put a limit. In 11 more minutes it will be 11:15.

MRS. LAWSON: My concern is with leachate, and the reason I am concerned is the experience of Port Hope at Pigeonville where houses are now contaminated, that lay approximately 100 yards from the Eldorado storage facility downhill from it. It is obvious that this contamination could only have come through groundwater leachate. It is also obvious from all the evidence that was presented that there has been a great deal of leaching from both dump sites. I am interested to read in the statement from Energy Mines and Resources, page 6, where Dr. Scott of The Geological Survey of Canada is also concerned about the choice of the Port Granby site from a geological point of view. I quote:

> "He talks about the rocks (number 3 partway down). He says that such rocks elsewhere in southern Ontario have been the subject of dissolution, particularly along points and bends in plains. Whether or not a cavity within the bedrock exists at the site is not known."

We heard evidence last week from Ernie Webster of

an enormous cavity on the Port Granby site, a great big pit. Do you remember? He described it.

I feel that there is sufficient serious doubt about the geological formation of this particular area, the Port Granby area, to have further investigation made. Dr. Scott also states that, with respect to the selection criteria, (number 1 on the same page):

> "For alternate sites, in the rationale the choice of the Port Granby site, no comment is offered on either the criteria or rationale."

In this country I would feel much safer if qualified geologists could offer the opinions on both the criteria and the rationale for the choice of Port Granby. I just wonder, couldln't some of these experts, these hydrogeologists, explain?

THE CHAIRMAN: Mrs. Lawson, I am sure they could either now or in writing, but I would like to remind you, in the second Phase we would like to have two hydrogeologists here so that one may speak on behalf of the proponent and the other to advise the panel. Perhaps we could discuss that in detail at the second phase of the hearing, unless one of the gentlemen

here tonightwould like to give a quick answer.

MR. GRANT: I don't know how we can. Just so you don't think we have not had concern about the geology, we dug 85 holes on that property so I think we know a little bit more from the geological point of view on the property than Webster, so we will be going into this geology question in depth.

MRS. LAWSON: Who told you this?

MR. DAKERS: Our consultants, Hydrogeology Incorporated.

MRS. LAWSON: What is his name?

MR. DAKERS: Coulson.

MR. GRANT: You mean the man who stood on the machine to dig the ground? I would like to know what the question is so I can answer.

THE CHAIRMAN: I mentioned before, it is getting a bit late. I am sure this is a subject that will be addressed in the second phase. My concern right now, from the comments you made earlier, Mrs. Lawson, regardless of what

the gentlemen here are going to say this evening, you are not going to be prepared to accept it at face value until it is corroborated or disputed by another expert anyway, and I feel we could get into that in the next phase of the hearings quite easily.

MRS. LAWSON: Okay.

THE CHAIRMAN: Thank you very much.

MR. HUMPHRIES (Port Granby): I just have a few questions about the site selection. I wonder, when was the actual date when Eldorado finally decided that Port Granby was the best site?

MR. GRANT: The exact date? When we decided, or when we decided to go ahead with the purchase? As I recall, I think you could probably tie that to the date we decided to proceed with the completion of the purchase. The purchase of the property, if my recollection serves me correctly, was starting about 1974 or 1975 when we acquired an option on the farm owned by a man named Salmon, and subsequent to that, we acquired additional contracts on the balance of the property. My recollection is we closed, I think we closed the purchase of those transactions

in late 1976 or early 1977.

MR. HUMPHRIES: So it initially was in 1975?

MR. GRANT: You know the Salmon farm? We had an option on that property, an option to buy that property, which goes back I believe to 1973, which really didn't have anything to do with the overall proposal. It wasn't a vacant piece of land. We had an option and that option, as I recall, expired in 1976, at which time we completed the purchase of the property of Mr. Salmon, and became the owner then. The balance of the property we had under conditional agreements and we took title to that property some time in late 1976 or early 1977.

MR. HUMPHRIES: They were to form a buffer zone?

MR. GRANT: And the whole thing.

MR. HUMPHRIES: The initial deal with Mr. Salmon was late in 1974?

MR. GRANT: The option on Mr. Salmon's property -- Mr. Salmon's property was put under option, not for purposes we had thought of at this time, not for purposes of the

refinery. They leased the north of the residue area and we took an option on the property.

MR. HUMPHRIES: I was trying to draw a parallel between the Port Hope refinery -- I was wondering if you could draw a parallel with the Port Hope refinery where there may be future plans of building a refinery later on for consideration of production in the Port Hope area to the farmland and, as a parallel, had all the required facilities there with the lake, the railroad, highway access?

MR. GRANT: I am not sure I understand you.

MR. HUMPHRIES: I was just trying to see if I could get a parallel. In the site selection Doug, I think it was, said he used the same data for the proposed area as the Port Granby area in the background material.

DR. CHAMBERS: Partially. The technical data we used was the same demographically, because it covers the same area. We augmented biological data, the water quality data, with data specific to the Port Granby site so, in other words, the data basis of the two types, the regional type of data that Steve spoke of in some detail, and

we walked the site and also walked the Newtonville site.

MR. HUMPHRIES: Can you tell me whether the traffic and the population are in this criteria that led you to make an equal comparison between Newtonville and Port Granby?

DR. CHAMBERS: I am sure those facts were considered some place. I couldn't remember now without lookin it up, where

MR. HUMPHRIES: I was wondering if there was a noticeable difference in the two areas. When was the study to include the Port Granby site, because there were three areas involved and it acquired the land -- I think Mr. Grant said it, there were three main areas that were proposed for the site and then it was brought down to 3 or 4 and Port Granby was stuck in because it was attractive land to be acquired? The land was already owned by the company?

MR. GRANT: No.

MR. HUMPHRIES: How about Burwash?

MR. GRANT: There was some reason why we decided there was nothing we could do. We looked at the site, not being aware

when we started to look there, there were as many owners of, say, 600 or 700 acres as there were.

MR. HUMPHRIES: Port Granby wasn't even in the original 14. When was it brought in? Since it had parallel with Port Hope work in progress with the lake, supplying the railroad tracks, the access by highways and other roads and the amount of land necessary, I was just wondering how that actually got into your proposal?

DR. CHAMBERS: I am slightly confused. I thought it was clear when Mr. Grant said earlier, or I said Eldorado had considered the site before they retained us. It only became a viable site -- I don't believe Mr. Grant mentioned this -- when it became potentially feasible to acquire a larger tract of land. At that time we said it would be appropriate to study it provided ---

MR. HUMPHRIES: What I understood was, in the initial 17 sites, it was not included.

DR. CHAMBERS: It was not one of the original 17.

MR. HUMPHRIES: When it was narrowed down to about three sites, Port Granby was

thought to be land necessary and it was brought in?

THE CHAIRMAN: I think it perhaps should be made clear; it has been made clear. Thank you. We are now past the deadline of 11:15 and I think I would like to thank everyone for their patience throughout this whole series of hearings, and I would also like to thank those who did present briefs and Eldorado for receiving them and for indicating the answers which we haven't yet got, and I think we can now adjourn these hearings until further notice. Thank you very much. (Applause)

--At 11:20 p.m. the hearing adjourned